

The MOTOR OWNER

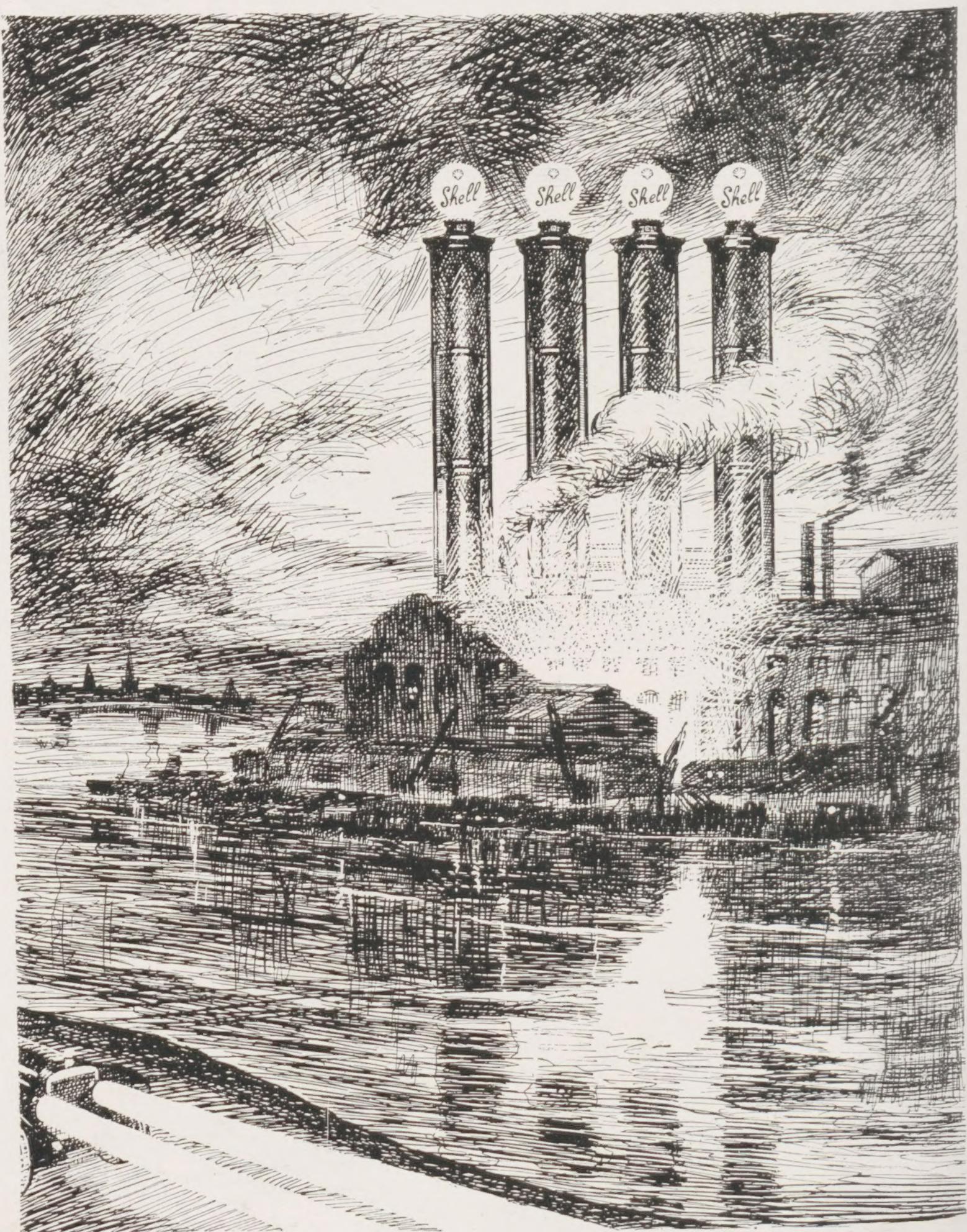


Have you tried **Daimler** the New Daimlers?

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C.F.H.
887
prietors,

ember 1925

One Shilling



Every Pump a Power Station



SHELL-MEX. LTD., G.P.O. BOX 148. SHELL CORNER, KINGSWAY, W.C. 2.

SHELL



Telephones:
MAYFAIR
1289
1290

BATTAM & HEYWOOD

(M. F. YORKE, P.A.S.I. F. G. NEVILLE, F.A.I. O. A. J. WHITEMAN, P.A.S.I., F.A.I.)

20, DAVIES ST., BERKELEY SQUARE, LONDON, W.I

BRANCHES:
The Estate Offices,
EFFINGHAM.
The Town Hall,
BASINGSTOKE.

MIDDLESEX

IN RURAL SURROUNDINGS 8 MILES FROM LONDON.



Nicely placed on high ground and approached by picturesque park. Recently redecorated and fitted with modern improvements.
Electric light and heating, Gas, Company's water and main drains.
Lounge, three reception rooms, six bedrooms, two baths, etc.
Garage.
OLD-FASHIONED GARDENS of about $\frac{1}{4}$ Acre.
Low Price.
For Sale, Privately, or by Auction later.

Sole Agents, BATTAM AND HEYWOOD, 20, Davies Street, W.I.

SURREY

1½ MILES FROM TOWN. GRAVEL SOIL.
AN ARCHITECT'S PLEASING RESIDENCE
Within 10 minutes main line station and 1½ mile two well-known golf courses.
Five bedrooms, bathroom, two reception rooms, and complete offices.
Beautifully finished. Separate hot water system.
Electric light. Main water and drains. Garage.
PRICE £2,750.

Sole Agents, BATTAM AND HEYWOOD, 20, Davies Street, W.I.

SUSSEX

Bordering the Ashdown Forest, over 300 ft. up, and close to quaint small village.



A DELIGHTFUL RESIDENCE
Containing lounge hall, two reception rooms, eight bed and dressing rooms, bathroom, etc.
Garage. Outbuildings.
Electric light. Ample water supply.
SUPERB GARDENS, with tennis lawn, pergola, two orchards, and paddock.
IN ALL FOUR ACRES.
A BARGAIN, £3,000, OR OFFER.
Piltdown and other golf links within easy reach.

Sole Agents, BATTAM AND HEYWOOD, 20, Davies Street, W.I.

BUCKS

ABOUT 50 MILES FROM LONDON.
CHARMING OLD-FASHIONED RESIDENCE
In excellent Hunting and Golfing district.
Three reception rooms, billiards room, five-eight bedrooms, bath, etc.
Garage.
Gas. Company's water. Main drainage.
GROUNDS OF ABOUT ONE ACRE.
ABSURDLY LOW PRICE, £1,450.

Agents, BATTAM AND HEYWOOD, 20, Davies Street, W.I.

ASHDOWN FOREST

(In the heart of). Delightful situation 500 ft. up on sand soil and close two famous golf courses.
PICTURESQUE COTTAGE RESIDENCE
With three reception rooms, six bedrooms, bath, etc.
DELIGHTFUL GARDENS, ONE ACRE.
PRICE, £2,300 FREEHOLD.
Should be seen immediately.

Agents, BATTAM AND HEYWOOD, 20, Davies Street, W.I.

KENT

EASY REACH OF MAIN LINE STATION.



A GEM OF THE BYGONE AGE.
A GENUINE ELIZABETHAN RESIDENCE
in black and white and in a perfect state of preservation; recently restored with up-to-date improvements. Rich with Oak beams and quarterings, open fireplaces, etc.
Lounge, three reception rooms, seven bedrooms, bath, etc. Stable and Garage.
Electric light. Company's water. Independent Hot Water Boiler.
OLD-WORLD GARDENS.
Tennis lawn, kitchen garden, orchard and meadows, about 8 ACRES.
PRICE, £2,500 FREEHOLD.
A further 60 Acres and second House can be had if desired.
Agents, BATTAM AND HEYWOOD, 20, Davies Street, W.I.

Estate Offices: 20, DAVIES ST., BERKELEY SQUARE, LONDON, W.I

WILL YOU KINDLY MENTION



WHEN REPLYING TO ADVERTISERS

November, 1925

Telegrams: "Teamwork, Piccy,
London."
Telephones: Mayfair 2300 & 2301
Grosvenor 1838

NORFOLK & PRIOR

20, BERKELEY STREET, PICCADILLY, W.1

Auctioneers and Surveyors,
Valuers,
Land and Estate Agents.

BERKS AND BUCKS BORDERS

In beautiful undulating country, close to a favourite reach of the Thames, yet within daily reach of London.



VIEW FROM THE STREAM

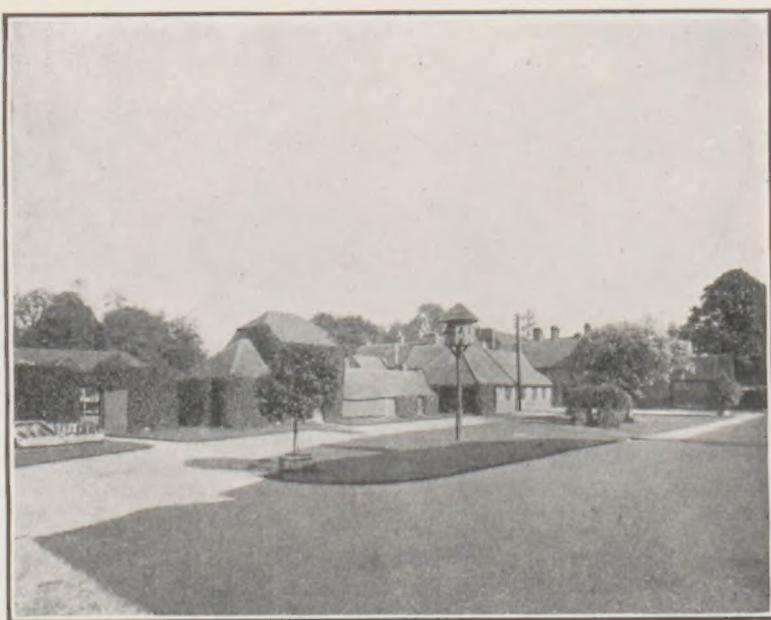
A PICTURESQUE QUEEN ANNE FARMHOUSE

upon which many thousands have been expended during the past few years ; in perfect order and equipped with every modern convenience.

Panelled hall, three charming reception rooms, beamed music room 60 ft. by 20 ft. (with organ, if desired), six family bedrooms, two bathrooms, guests' and servants' bedrooms in annexe, ample offices; electric light, central heating, main water, 'phone.

TWO COTTAGES.

Beautifully disposed grounds, intersected by a stream, tennis lawn, bowling green, etc. ; in all
FIVE ACRES.



THE COURTYARD AND COTTAGES

FOR SALE FREEHOLD.

Illustrated particulars from Sole Agents, NORFOLK & PRIOR, 20, Berkeley Street, W.1.

THE MUSIC ROOM



Inspected and recommended.
(6084)

Telephone:
Regent 7500

Telegrams:
"Selanlet, Piccy, London"

HAMPTON & SONS

20, ST. JAMES' SQUARE, S.W.1

Branches { Wimbledon :
'Phone 80.
Hampstead :
'Phone 2727.

HERTS AND MIDDLESEX (BORDERS).

ABOUT 1½ MILES FROM MILL HILL STATION.

10 MILES FROM MARBLE ARCH.

Near Several Golf Courses.

The Exceedingly Choice Historical FREEHOLD RESIDENTIAL PROPERTY,
known as

"HIGHWOOD HOUSE," MILL HILL.

450 ft. above sea-level, and occupying one of the finest positions north of Town.
The Georgian House contains 12 bedrooms, three baths, lounge, central hall, four
reception-rooms, music or billiard room, conservatories, and complete offices.

Electric light. Gas. Central heating. Main drainage. Excellent repair.
Exquisitely decorated.

Stabling. Extensive Garage. Two Cottages and Lodge.
Delightful old-world grounds, orchard, partly-walled kitchen and fruit gardens,
woodlands, meadowland, farmery, in all about
28 ACRES.

VACANT POSSESSION.

To be SOLD by AUCTION, at the St. James' Estate Rooms, 20, St. James' Square,
S.W.1, on Tuesday, November 17th, at 2.30 p.m. (unless previously sold).
Solicitors: Messrs. Burchells, 5, The Sanctuary, Westminster, S.W.

Particulars of the Auctioneers:
HAMPTON AND SONS, 20, St. James' Square, S.W.1.



SUFFOLK.

1½ MILES FROM WELNETHAM, 2½ FROM THURSTON,
AND 4½ FROM BURY ST. EDMUNDS STATIONS, AND
WITHIN EASY REACH OF GOLF AND HUNTING.

"ROUGHAM HOUSE," NEAR BURY ST. EDMUNDS.

A COMPACT FREEHOLD PROPERTY in choice
position, 250 ft. up, comprising old-fashioned House ap-
proached by drive, and containing eight bedrooms, two
attics, three bathrooms, two staircases, lounge hall, four
charming reception-rooms, and convenient offices.

Good repair. Central heating. Electric light. Old oak beams
and floors.

Stabling. Garage. Small Farmery. Glasshouses. Pretty
gardens, orchard, and grassland, in all nearly
16 ACRES.

WITH VACANT POSSESSION.

To be SOLD BY AUCTION, at the St. James' Estate
Rooms, 20, St. James' Square, S.W.1, on Tuesday, November
10th, at 2.30 p.m. (unless previously sold).

Solicitors: Messrs. Glover, Humphreys and Boyes, 4,
King's Bench Walk, Temple, E.C.4.

Particulars from the Auctioneers:
HAMPTON AND SONS, 20, St. James' Square, S.W.1.

KENT.

ABOUT 12 MINUTES' WALK FROM BEXLEY STATION.
SEVERAL GOLF COURSES CLOSE AT HAND.

The Comfortable and Well-built
FREEHOLD FAMILY RESIDENCE,

"IVYDENE,"

COLD BLOW, BEXLEY.

In rural and bracing position, with nice open views.

Approached by carriage drive, and containing: Hall,
two reception-rooms, magnificent billiard and card room,
nine or ten bedrooms, two nurseries, two bathrooms, and
compact offices.

Central heating. Electric light, gas, and water. Main
drainage. Garage for two or three cars.

Lovely Pleasure Grounds of about

TWO ACRES.

WITH VACANT POSSESSION.

To be SOLD BY AUCTION, at the St. James' Estate
Rooms, 20, St. James' Square, S.W.1, on Tuesday, November
17th, at 2.30 p.m. (unless previously sold).

Solicitors: Messrs. Devonshire, Wreford-Brown and Co.,
38, Old Jewry, E.C.

Particulars from the Auctioneers:

HAMPTON AND SONS, 20, St. James' Square, S.W.1.

BROMLEY, KENT.

IN THE BEAUTIFUL COUNTRY BETWEEN CHISLEHURST AND BROMLEY.

300 ft. up on dry gravel soil.

Close to several stations and under half an hour from Town.

"MAVELSTONE."

Exceptionally choice FREEHOLD RESIDENTIAL PROPERTY, comprising
modern stone-built house in the Italian style. Approached by drive and lodge and
containing, on two floors only, halls, three reception-rooms, billiard-room, loggia,
conservatory, two staircases, eight bedrooms, bathrooms, and compact offices.

Garage for four cars. Chauffeur's quarters.
Central heating. Electric light. Main drainage.

Exceptionally beautiful grounds and gardens, etc., of about

THREE AND A HALF ACRES.

Also

Two Choice SITES of over 2 and 6 ACRES respectively. One laid out as lovely
rock garden and the other natural woodland.

WITH VACANT POSSESSION.

To be SOLD BY AUCTION, at the St. James' Estate Rooms, 20, St. James'
Square, S.W.1, on Tuesday, November 10th, at 2.30 p.m. (unless previously sold).
Solicitors: Messrs. Peacock and Goddard, 3, South Square, Gray's Inn, W.C.1.

Illustrated particulars and conditions of sale from the Auctioneers:

HAMPTON AND SONS, 20, St. James' Square, S.W.1.

ST. JAMES' ESTATE ROOMS

WILL YOU KINDLY MENTION

The
MOTOR
OWNER

WHEN REPLYING TO ADVERTISERS

November, 1925



YOU WILL READ IN THE
NEXT ISSUE OF
ENGLEBERT MAGAZINE
A DETAILED AND PLENTIFULLY
ILLUSTRATED RELATION OF
BROOKLANDS 200 MILES RACE

WHICH WAS WON BY

1500 c.c. CLASS: 1st—MAJOR SEGRAVE on TALBOT-DARRACQ

2nd—MASETTI on TALBOT-DARRACQ

1100 c.c. CLASS: 1st—GOUTTE on SALMSON

2nd—DE MARNIER on SALMSON

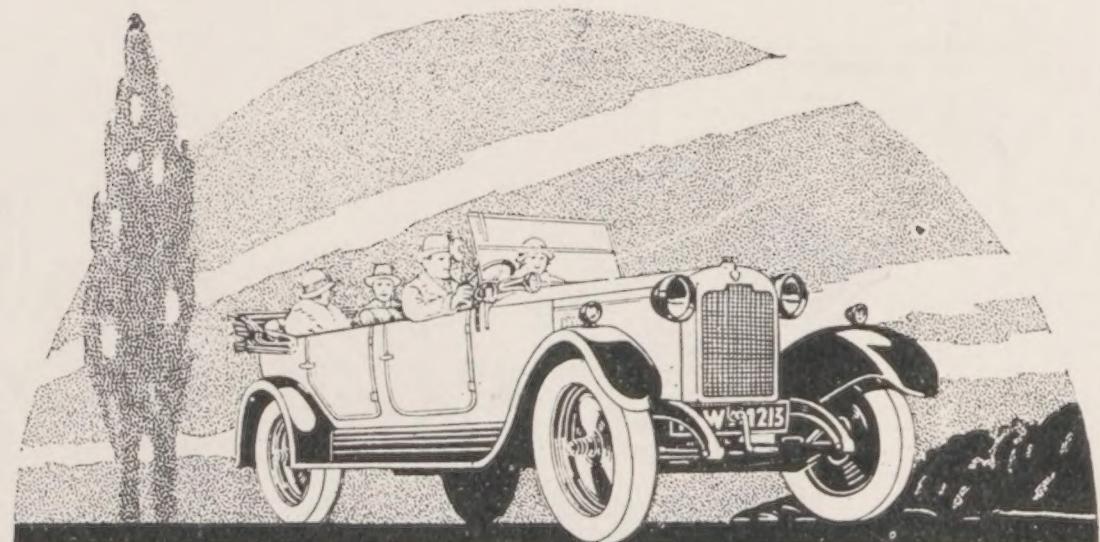
ALL CARS FITTED WITH

ENGLEBERT TYRES

ENGLEBERT TYRES, LTD., GREAT PORTLAND STREET, LONDON

ROVER SET THE FASHION TO THE WORLD

The 9/20 h.p.
ROVER
"Its tax is 9—
its power is 20"



*Sturdy as an
old sea-rover*

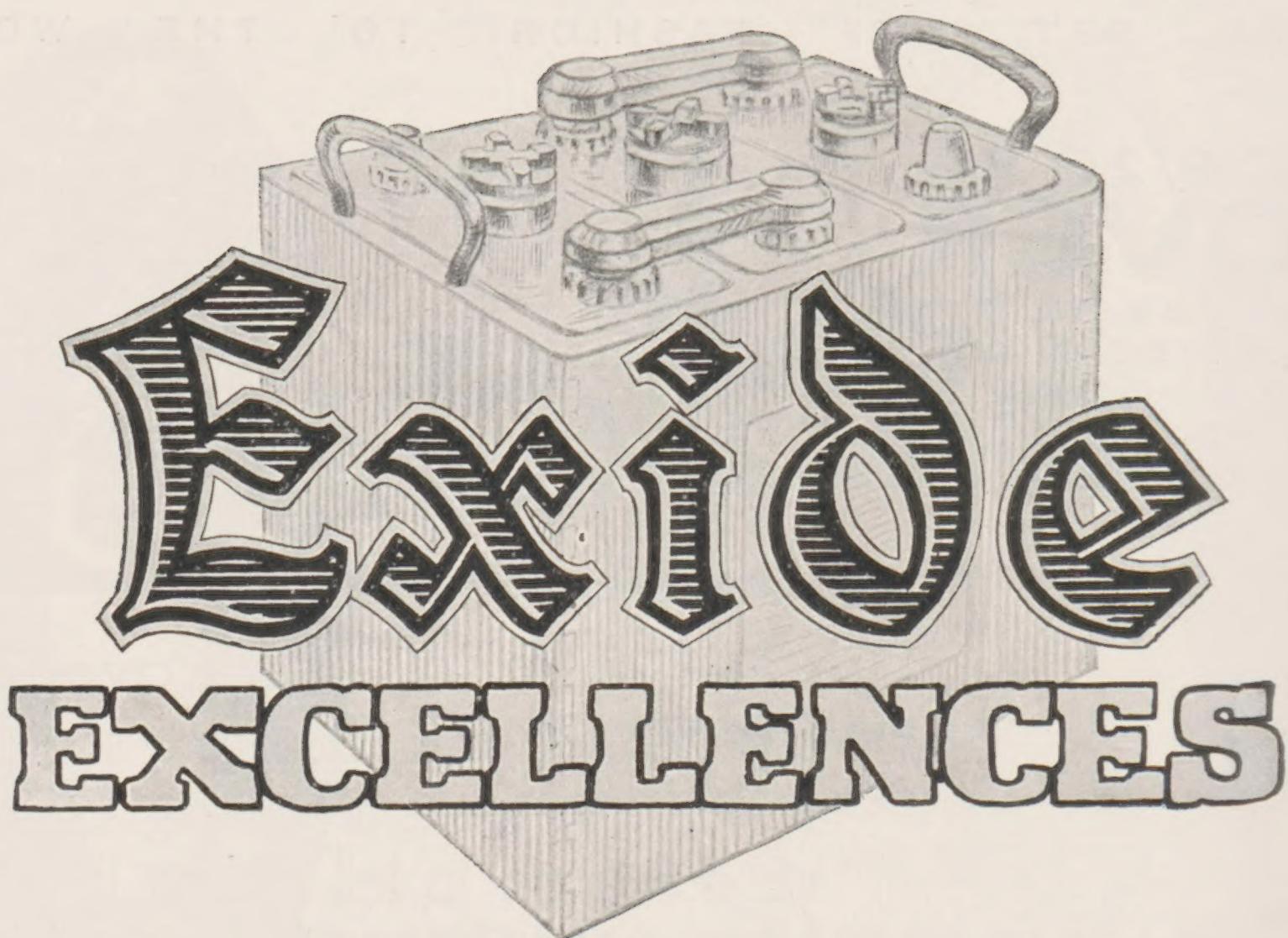
Drive a 9/20 h.p. Rover if you want to get real enjoyment from every moment you spend in your car. Of course we don't need to tell you that the Rover has an unrivalled reputation for reliability, but perhaps you don't realise what a difference there is in the engine of the 9/20 h.p. Rover. There's "pep" about its 4-cylinder overhead-valve power unit: good acceleration and a pleasant feeling of "life". And although the body is so roomy, petrol and oil cost barely $\frac{1}{2}$ a mile. Better write for the catalogue to-day!

Four-cylinder overhead valve engine, lubricated by pressure, water-cooled by pump circulation. R.A.C. rating 8.9 h.p.—develops over 20 h.p. Three speeds and reverse. "Super" model has four wheel brakes. Unusually well sprung: *Dunlop* balloon tyres. Models: "Standard" 2-seater, £185; "Standard" 4-seater, £190; "De Luxe" 2-seater, £200; "De Luxe" 4-seater, £205; "Super" 2-seater, £220; "Super" 4-seater, £225; "Super" Saloon, £285; Sports model (with dickey) £220.

ROVER

THE ROVER COMPANY LTD.
61, NEW BOND STREET, W.1
Works - - COVENTRY

ROVER IS BRITISH ALL THROUGH



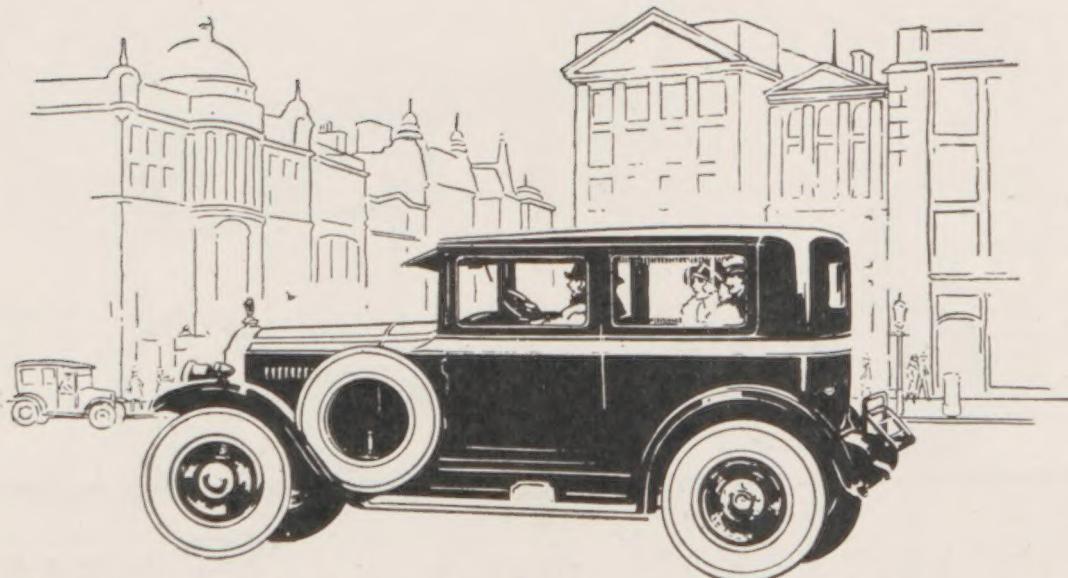
Separators

of tough, yet very porous wood
treated by a patent process
they ensure perfect insulation
with maximum porosity & give
resilient support to the plates

Exide
The Long-Life Battery
Obtainable from Traders Everywhere.

No. 2 of a series of advertisements by The Chloride Electrical Storage Co., Ltd.

November, 1925 WILL YOU KINDLY MENTION **MOTOR OWNER** WHEN REPLYING TO ADVERTISERS



*Beauty that delights the Eye -
Comfort and Safety for Physical
and Mental relaxation - Action
and Power that Thrill ~*

NEVER before in the entire history of motoring has such a combination of super-excellence been built into any one car as is now offered in the 1926 British Empire Buick.

In Buick's superb engine is an inexhaustible fund of silent power and exhilarating, effortless speed. Every demand is amply met, every mood happily indulged.

Studied excellence is the keynote of its equipment and beautifully appointed interior. Every refinement worthy of so great a name is found incorporated in the Buick, without show or ostentation.

And Buick's superlative beauty needs no emphasis. Its lovely lines are further beautified by distinctive two-tone colour combinations of lustrous Dupont Viscolac.

*Ask your dealer for a demonstration and trial run—
without obligation.*

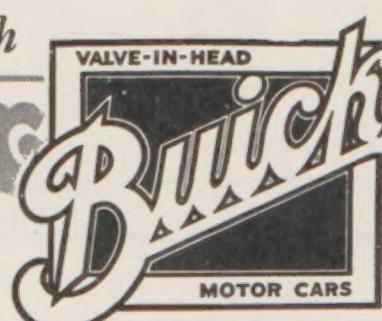
20-58 h.p. 5-seater Tourer ... £399	20-58 h.p. 2-Door Saloon ... £495
20-58 h.p. 2-seater Roadster £399	20-58 h.p. 4-Door Saloon ... £550
25-75 h.p. Pullman Limousine ... £795	

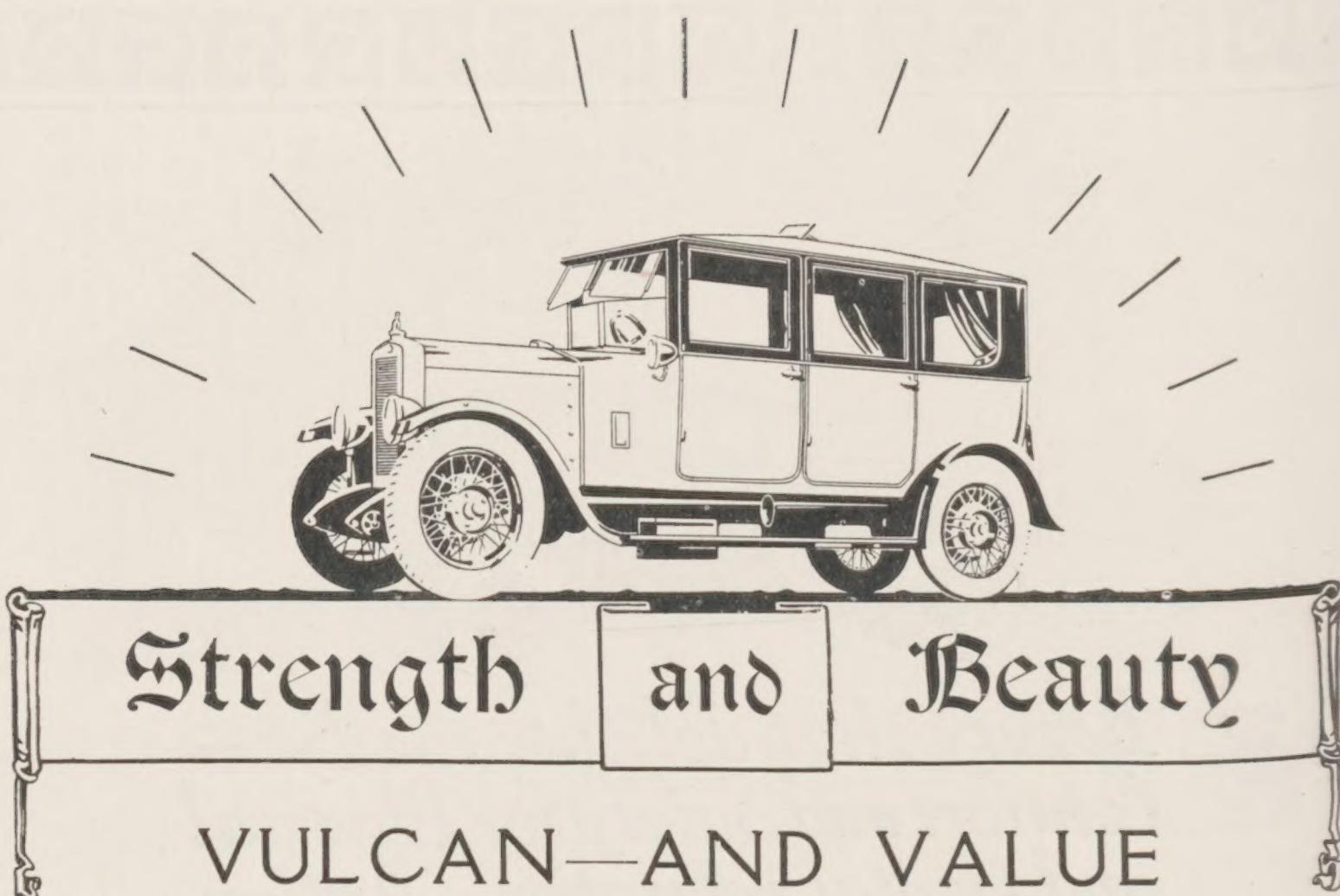
WHEN BETTER CARS ARE BUILT, BUICK WILL BUILD THEM.

GENERAL MOTORS, LTD., EDGWARE ROAD, THE HYDE, LONDON, N.W.9

The British

Empire Buick





Strength and Beauty

VULCAN—AND VALUE

HE new Vulcan "12" O.H.V. Model solves the problem of the man who wants an extra 10 m.p.h.—but not at a large extra cost. A beautiful car is the Vulcan. Beautifully designed, "lively," graceful, an engineering masterpiece. Well within your means. Comfortable too. Luxurious individual adjustable seats—plenty of leg room. Cantilever springs and balloon tyres. Equally delightful to speed on that favourite stretch of yours as on a pretty, but bumpy country lane you avoid nowadays. A "revving," pulling engine that flattens hills.

The Vulcan "12" M.V. Type offers Better Value than ever for 1926. Try the seats: the front ones are adjustable. What comfort! What leg room! Look at it from a distance—it's elegant. Four-wheel brakes, shock absorbers and "finger light" steering, too. Equipment enough for a world tour. These are a few of the improvements, with no increase in price. The finest value British engineering has ever given motordom. An illustrated descriptive brochure of either model, or both if you wish, will be sent on receipt of your request. A postcard will do.



O.H.V. 4/5 Seater Four-door Saloon £475
O.H.V. 4/5 Seater Tourer ... £375
"12" M.V. Saloon £395
"12" M.V. 2/3 or 4.5 Seater Tourer £295

*All models fitted with four-wheel
brakes*



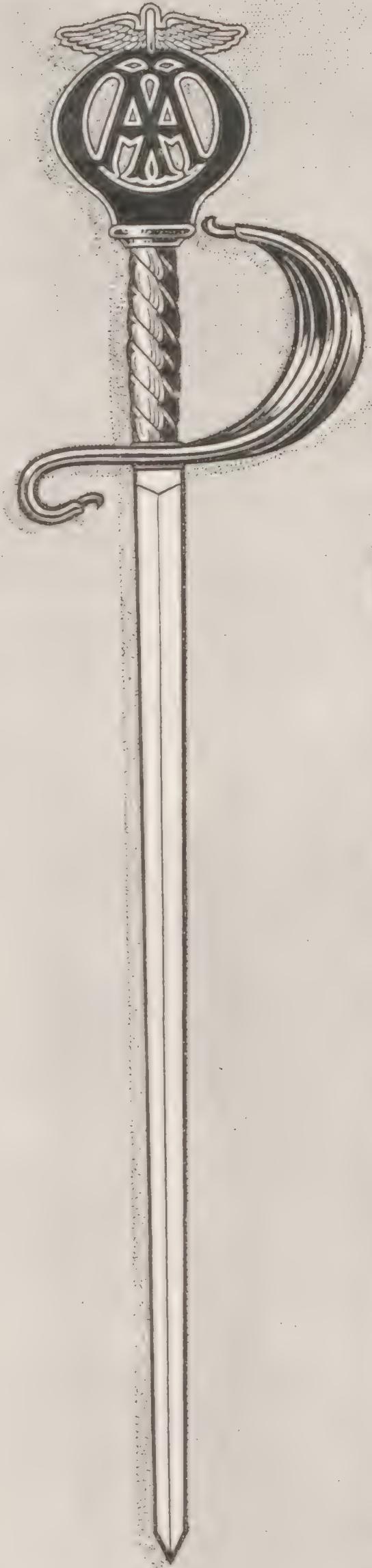
THE VULCAN MOTOR AND
ENGINEERING CO. (1906), LTD.,
(Dept. AR 62) SOUTHPORT, LANCS.

Depots: LONDON: 118-122, Gt. Portland
Street, W.I. GLASGOW: Hope Street.
MANCHESTER: Mount Street, Albert Square.
LIVERPOOL: Old Hall Street. LEEDS:
Post Office House. CARLISLE: The
Crescent. NEWCASTLE: Haymarket.

Sales and Service Agents Everywhere

v. 19

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Free Legal Defence

FOREMOST among the great boons to modern motoring are A.A. Free Legal Defence and Advice, and A.A. Road Service.

The former saves the member much time, expense, and anxiety; whilst the latter, with its day and night Road Service Outfits, has become an indispensable institution.

But the comprehensive nature of A.A. Road Service cannot be rightfully judged unless the many other benefits are taken into consideration: Roadside Telephones, Home and Foreign Touring Assistance, Engineering Advice, Appointed Hotels and Repairers, etc.

If you are not a member, write for Booklet "Always Ahead," obtainable from the Secretary,

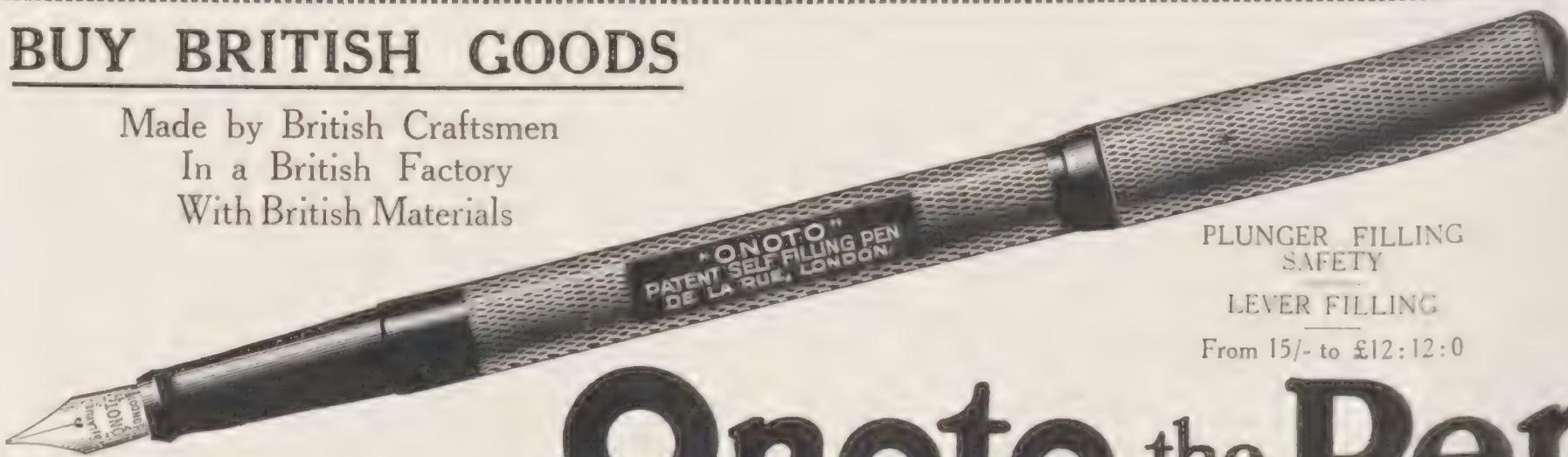
THE AUTOMOBILE ASSOCIATION,
16, FANUM HOUSE, NEW COVENTRY STREET,
LONDON, W.1

C.D.C.

A. A. MEMBERSHIP IS NOW OVER 250,000

BUY BRITISH GOODS

Made by British Craftsmen
In a British Factory
With British Materials



OF ALL
STATIONERS AND JEWELLERS

GOODALL'S BRITISH PLAYING CARDS



DESIGNS IN GOLD AND COLOURS
HANDSOMELY BOXED

BOUDOIR SERIES NARROW SIZE

LINETTE GRAINED GOLD EDGES

SALON SERIES

STANDARD SIZE
LINETTE GRAINED GOLD EDGES

LINETTE SERIES

LINEN GRAINED DESIGNS IN SINGLE COLOUR
TUCK CASED
THE WORLD'S CLUB CARD

CHAS. GOODALL & SON, LTD.

110 Bunhill Row, E.C.1 } LONDON
17 St. Bride St., E.C.4 }

Onoto the Pen

THOMAS DE LA RUE & CO., LTD.

ONOTO SERVICE DEPOTS

110 Bunhill Row, E.C.1

17 St. Bride Street, E.C.4

139 High Holborn, W.C.1

LONDON

PLUNGER FILLING
SAFETY

LEVER FILLING

From 15/- to £12:12:0

DE LA RUE'S BRITISH PLAYING CARDS



PALACE GOLD MOGULS

GOLD EDGES
IN PRESENTATION BOXES

PNEUMATIC SERIES

MINUTE GROOVES ON BACKS

FLAXETTE SERIES

LINEN SURFACE BOTH SIDES

CAMBRIE SERIES

LINEN SURFACE ON BACKS

THOMAS DE LA RUE & CO., LTD.
LONDON PARIS NEW YORK

• Head Office:
110 BUNHILL ROW, E.C.1

Showrooms:
17 ST. BRIDE STREET, E.C.4



satisfaction



It is not necessary to be a mechanic to discover for yourself the cause of most engine upkeep expenses. There are many owner-drivers who are always "lucky" with their engines, although they are not themselves expert mechanicians. Ask one of these "lucky" owners why he has so little trouble. He will tell you that lubrication is the secret.

Keeping every working surface continually protected by a non-gumming oil film is the only source of "good luck" in motor-car operation. Faulty lubrication of purely mineral oils puts motor engines prematurely on the scrap heap. Huile de Luxe is a scientific blend of fatty oils and hydrocarbons that cuts friction to the irreducible minimum.

"Huile de Luxe
banished chatter and
repair bills"
—from an "Amateur
Motorist's" unsolicited
letter in praise of
Huile de Luxe.



PRICE'S PATENT CANDLE CO. LTD.
BATTERSEA, LONDON, S.W. 11

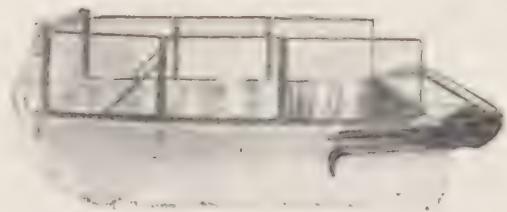
HUILE de Luxe

Prepared in three Grades
ZERO - WINTER - SUMMER

Patent Rigid all-weather

ROTAX

Side Curtain equipment



View showing hood down

MORRIS-OXFORD, 4-seater, 6 panels, 2-30" x 16½".	Price £7-7-0
2-32½" x 16½", 2-23" x 16½" ..	Price £7-7-0
MORRIS-OXFORD, 2-seater, 4 panels, 2-25" x 16½".	Price £3-18-9
2-16½" x 16½" ..	Price £3-18-9
MORRIS-COWLEY, 4-seater, 6 panels, 2-26½" x 16½".	Price £6-16-6
2-29½" x 16½", 2-18½" x 16½" ..	Price £6-16-6
MORRIS-COWLEY, 2-seater, 4 panels, 2-24" x 16½".	Price £3-13-6
2-13" x 16½" ..	Price £3-13-6

ROTAX CASE OF SPARE BULBS



For 5-Lamp Sets with
Dash Lamps

CAT. No. 4362

PRICE EACH 14/6

FOR THREE-LAMP SETS

In square box.

CAT. No. 4363

PRICE EACH 10/-

YOU can carry this new Rotax Case of spare bulbs among the tools or anywhere convenient without fear of breakage. All-metal case, plush lined and shaped. Supplied as illustrated with 2 24-w. Head, 2 6-c.p. Side, 1 3-c.p. Tail and 1 3-c.p. Dash. For 12 or 6-volt Equipments.

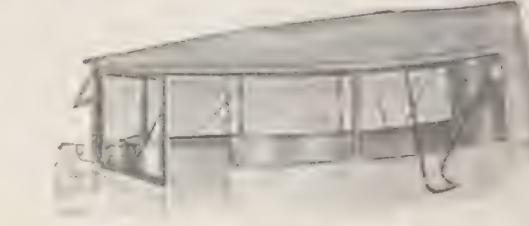
WINDSCREEN MOUNTING



A VERY fine spotlight. Can be swivelled in any direction required, and gives powerful light projection. Invaluable for reading signposts, finding turnings, etc.

Cat. No. 550 Windscreen Mounting | Price Each
Cat. No. 551 for Saloon Carriages | 35/-

ROTAX SPOTLIGHT



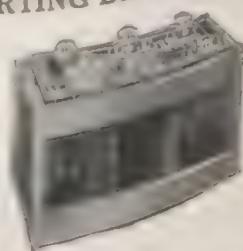
View showing hood up

ESSEX, 4-seater, 6 panels, 2-30" x 19½", 2-23" x 19½", 2-26" x 19" ..	Price £8-2-0
FIAT, 4-seater, 6 panels, 2-25" x 18", 2-25" x 18" ..	Price £6-16-6
STUDEBAKER, 4-seater, 6 panels, 2-23½" x 21", 2-10½" x 21", 2-22½" x 21", 2-14" x 21" ..	Price £9-9-0
JOWETT, 4-seater, 6 panels, 2-17½" x 15½", 2-17½" x 15½" ..	Price £5-15-6

ROTAX LIGHTING & STARTING BATTERIES

WHY not fit a Rotax "battery" to this time and enjoy a long period of no-trouble service? Backed by 20 years' experience. Its construction includes such special features as: "RIBBED EBONITE SEPARATORS, VIBRATION RESISTING PLATES, WELDED COLLECTOR BARS, NONCORROSISS TERMINALS." Made in sizes for all Cars (H.P., year and make should be stated when ordering.)

12 VOLT 66 AMP. ..	£6 8 6
M 12 VOLT 48 AMP. ..	£5 15 6
12 VOLT 44 AMP. ..	£5 10 0
6 VOLT 120 AMP. ..	£4 16 0
F 6 VOLT 72 AMP. ..	£3 10 0
C 6 VOLT 60 AMP. ..	£3 10 0
M Suitable for Morris; F Suitable for Ford; C Suitable for Citroen.	



For Buses and
Commercial Vehicles

COMPLETE LIGHTING
AND STARTING
EQUIPMENTS
from £28 0 6

ROTAX (MOTOR ACCESSORIES) LTD.

ROTAX WORKS, WILLESDEN JUNCTION, LONDON, N.W.10

BRANCH DEPOTS:

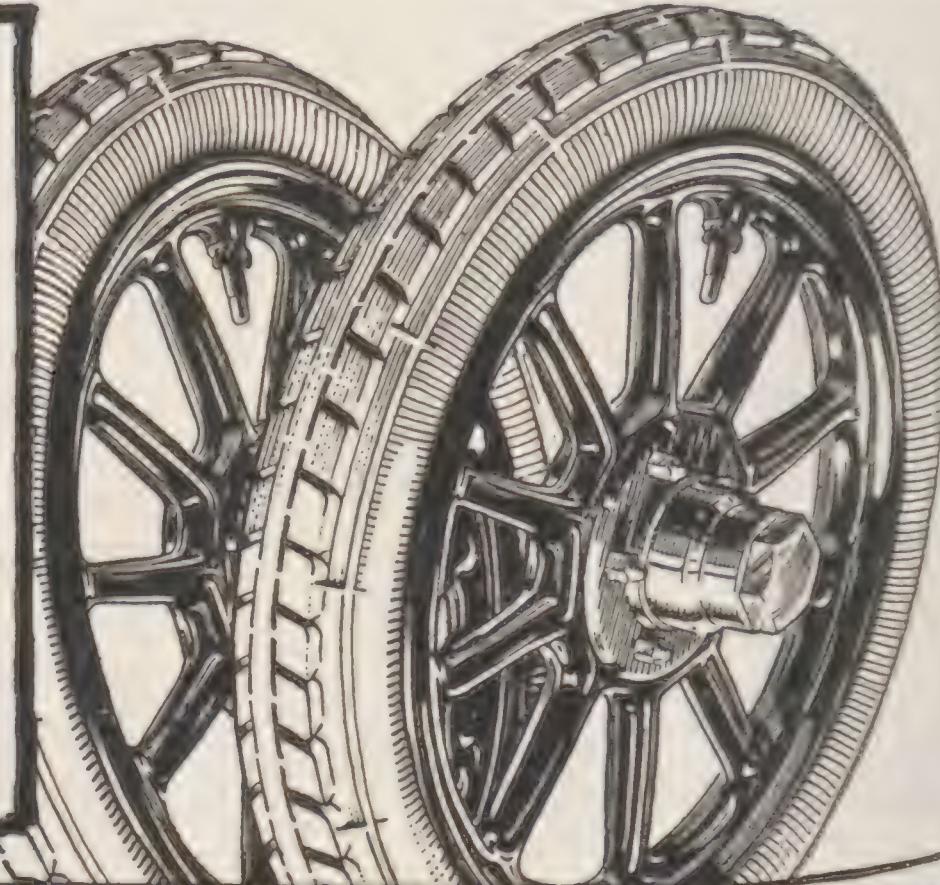
BIRMINGHAM: Landor St. MANCHESTER: 291/3 Deansgate.

TAUNTON: Newton's Works. BRISTOL: 7 Temple St.

GLASGOW: 19/21 Oswald St. LEEDS: 117 Park Lane.

When you seriously consider the enormous strain placed on the wheels of your car you will realise the necessity of having nothing but the safest and strongest obtainable
—SANKEY WHEELS

STRAIGHT SIDE RIMS
WELL BASE RIMS
BEADED EDGE RIMS



SANKEY Patent All Steel WHEELS

JOSEPH SANKEY & SONS, LTD., Hadley Castle Works, WELLINGTON, SHROPSHIRE

Phone: Wellington, Shropshire, 66. Grams: "Sankey, Wellington, Shropshire."
LONDON OFFICE: Mr. R. Jenkins, Ulster Chambers, 168 Regent Street, W1.



To the New Driver

... The Brake Pedal is the most important pedal on your car.

Mr. T. C. Griffiths, Chief Constable of Chester, says:—"An experienced motorist with good brakes, travelling fast, is safer than a novice on a car with poor brakes at a much slower speed." It is always a question of brakes. Nothing will give you greater confidence than the knowledge that your car is under control in every emergency.

Fit, or have fitted for you, Ferodo Friction Linings and be master of your car. Ferodo Linings never let you down—they are made from woven asbestos, which will not burn, and are chemically impregnated to give three times the wear of cast iron. You will then have an extremely powerful brake which will give thousands of miles of hard service and require little adjustment.

FERODO
REGISTERED
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THE MOTOR OWNER

Managing Editor:

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NOVEMBER · 1925

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The Editor will be pleased to consider contributions of special interest to the car owner, provided they are of high quality and in every way suitable to the magazine. Short illustrated articles are preferred, dealing with any aspect of private motoring, either as regards touring or the home management of the car. First-class snapshots of roadside scenes or incidents are particularly desired. All photographs and sketches should be fully titled on the backs and bear the name and address of the sender.

Contributions should be addressed to the Editor of "The Motor Owner," 10, Henrietta Street, W.C.2, and should be accompanied by a stamped, addressed envelope. While every effort will be made to return them if unsuitable, the Editor cannot hold himself responsible in case of loss or damage.

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The summer hath its joys
And winter his delights ;
Though love and all his pleasures are but toys,
They shorten tedious nights. THOMAS CAMPION.





SEEN THROUGH THE SCREEN

THE success of the 200 miles race, promoted by the Junior Car Club at Brooklands recently, is a distinct blow to the doubters and scoffers who were opposed to the principle of introducing conditions which have been confined hitherto to road racing.

The provision of two hair-pin bends, which had to be negotiated by every competitor during each circuit of the course, was a test not only of skilful driving, but of car stamina. The huge attendance, and the intense interest displayed in the event are conclusive proofs that the public demand searching tests of this description as evidence of the all-round qualities of a car.

As is usual in successful innovations, numerous claimants have arisen as originators of the idea. We stated in our October issue that the suggestion was mooted in THE MOTOR OWNER in 1922, and reproduced pictorial evidence of the fact that we had given publicity to it in November of that year. The idea, however, was originally evolved, and passed on to us, by Mr. John F. Pugh, of the Rudge Whitworth Company.

On the principle of "What is fitting is honourable; what is honourable is fitting," it is due to Mr. Pugh that we should mention his connection with the matter.

It is to be hoped that the triumphant issue of the initial experiment will induce further developments. We should like to see a similar event in all the principal Brooklands meetings.

Back to the Red Flag.

Although all sane motorists will be by the side of His Honour Judge Ruegg in his dictum that "a high standard of care should be exercised by every motor driver," they will most certainly leave him to walk alone when he gets beyond the point of his discourse.

The pedestrian metaphor is rather apt, seeing that His Honour is evidently not believer in speed. He is of the opinion that the rate at which the law allows a

motor car to be driven is in itself a danger to the public. He amplifies the point by expressing his belief that *motor vehicles cannot be driven with safety at twenty miles an hour, even by a careful driver!*

We plead guilty to the italics and the note of exclamation. There are occasions when accentuation of a detractor's own words is sufficient answer.

The Spoken Word.

We read that Mr. Laurie H. Pearson has invented a system whereby electricity can be controlled by word of mouth; and, further, that the inventor will be able to start or stop a motor engine by spoken word. This suggests possibilities better expressed by song.—"Boy! Our lute!"

O Petrol, Spirit of the car,
Strange is the news I've heard;
The day is coming when we'll drive
Cars by the spoken word.
We just make one short, sharp command,
Say, like the sergeant-major's voice,
And off the car will start apace,
It ought to make the heart rejoice.
And yet—hold hard—I trace a snag:
Will each car know its owner's voice,
Or will it dash full speed ahead,
When ordered so by impish boys?
Or if I wish my car to stop,
And someone else desires my place,
Will my car take his orders, or
Intelligently know my face?

Now cars, we know, are female sex!
Suppose the driver's very plain,
Will she his word and wish obey,
Or that of some more dashing swain?
I see not far ahead the time
When things like these the nerves will jar,
The Eternal Triangle will be,
Two men and one gay motor-car!
For what young motor-car of sense
Will still obey her master's voice,
If it be harsh, or rough, or thin,
And a sweet tenor is her choice?
Our way is fraught with perils now,
Such schemes as these more grief foretell,
The road that's paved with good intentions
Is sure the road that leads to—well!

Hard Got, Soon Gone.

The National Accounts for the first half of the financial year furnish indication of the great increase in the number of motorists.

Whilst several items of revenue show a marked decrease in the receipts as compared with September, 1924, the Motor Vehicle Duties have improved by £732,000, the total amount collected for the six months ending September 30th, 1925, being £4,838,000.

Another piece of information bearing on the subject is that there is to be a motor-car for every 78 of the population. This figure presumably includes all petrol-driven vehicles, omnibuses, taxis, and so on. Anyway, it emanates from the Minister of Transport. On his head be it. If there has been any mistake in the calculations we shall be seriously annoyed!

The Sleepers Awake.

At last there are signs that the authorities responsible for traffic arrangements are waking up to the necessity for arranging, both in London and the Provinces, more parking facilities for cars.

This long overdue improvement is brought about, so far as the Ministry of Transport (which controls these matters in the London area) are concerned, by the London Traffic Act (1924). The Ministry of Health, which is responsible outside the London area, work under the Public Health Act (1925).

The regulations connected with the London area specify the places at which vehicles may be parked; the length of time they may remain; and the hours during which they may be parked.

There are 87 parks in all, and the regulations apply not only to the centre of London but districts so far distant from it as Golders Green and Ealing.

It is true that provision is made for only 1,500 cars, an infinitesimal fraction of the thousands who require such accommodation; but, still, the noble army of motorists have learnt long

ago to accept small mercies with becoming gratitude!

Room For a Few.

The capacity of the parks varies from four in busy streets up to 130 in St. James's Square. For instance, Waterloo Place is allowed seventy, and Grosvenor Square fifty. The period during which a car may remain at the various parks fluctuates between one and two hours. It is to be hoped that this latter regulation will not be interpreted too harshly, or we shall, in many cases, have blanks in the ranks. Cars which have exhausted their maximum period of occupation will be cast adrift, irrespective of whether their owners desire to move or not, although there are no other vehicles waiting to take the vacated place.

THE MOTOR OWNER trusts that an attitude of "sweet reasonableness" during the less busy periods will be permitted to the attendant in charge.

Parking in the Provinces.

The new Act which regulates these matters outside the London area gives local authorities wide powers. Under its provisions they are permitted to set aside certain streets for parking purposes. For these they are not permitted to make any charge. However, they are also empowered to purchase and equip suitable open spaces to supplement the street accommodation. In the case of these acquisitions, the local authorities are entitled to exact a fee.

Providing that this charge is not exorbitant, we are sure that motorists will be only too willing to unfasten their purse-strings. And it is quite within the bounds of probability that an enterprising town may add considerably to its revenues from this source, in addition to relieving the congestion of traffic within its bounds.

A Stream of Oil.

Whilst we are all agreed as to the virtues of frequent and efficacious lubrication, there is a point at which it is wise to call a halt. Such a period occurred in the City a short time back.

A tank belonging to the Shell-Mex Company, evidently anxious to bestow, without fee, a plen-

tude of its precious burden upon an undeserving world, developed a leak. A greasy stream composed of two hundred gallons of lubricating oil soon spread from kerb to kerb of the street.

Then the fun commenced. Passing cars began to develop bad habits quite foreign to their usual mode of conduct. Some slid quickly into the kerb, whilst others, acting under the impulse of suddenly applied brakes, skidded completely round and faced the opposite way to which they had been proceeding.

Getting out of a traffic block at Ludgate Circus on a foggy day was sheer pastime as compared with extracting a car from that greasy lake. Careful tacking to and from the nearest kerb was the only method which met with success.

The situation was not without humour, but we were glad that our car arrived on the scene just too late to join in the fun!

That which is to Come.

A remark which we overheard at the Motor Show gave us furiously to think. It was by the stand of a firm which can claim to market one of the most up-to-date modern cars. The speaker was commenting favourably upon the improvements in this model, and, incidentally, we were in perfect agreement with what he said. It was only when he indulged in "the rapture of the forward view" that we began to get on our hind legs.

"I suppose we have reached the final stage of improvements in engine efficiency" was the remark which brought about this fiery action.

Ye gods and little fishes!— "The last stage in engine efficiency." The man was an absolute stranger, but we had to exercise great restraint to prevent ourselves from plunging into the conversation with red-hot zeal.

Had we done so, we should have quoted *in extenso* the remarks of Mr. C. F. Kettering, President of the General Motors Research Corporation—a man who, surely, can speak with authority on such a matter.

What an Expert Says.

"To-day we get 5 per cent. of energy out of petrol, 95 per cent. being thrown away," he states. "Engines can be built that will give at least 50 per cent. efficiency. That is the problem on which we are working entirely from the economics of the situation, recognising that with the enormous increase in motoring we shall use 12,000,000,000 gallons of fuel in America this year, and 15,000,000,000 next year. At this increased rate we must build engines of very much smaller size and sacrifice many advantages we now enjoy in the motor industry, or do something which will allow us to get more work out of the fuel unit."

Please Do Not "Stunt."

THE MOTOR OWNER regrets that the exhortation to push-cyclists, issued some time back by the Commissioner of Police, seems to have had

little or no effect.

It will be remembered that the voluntary of the push-bike were joined to abstain from the practice of riding several abreast, and were reminded that it was unwise for their own safety, and unfair to faster traffic, for cyclists to occupy the left crown of the road. These suggestions are, in a great number of cases, completely ignored.

Added to this disregard of Safety First principle in the mass, there are also individual acts of bold hardiness.

These remarks are not made in any carping class spirit as between motorists and cyclist. They merely constitute an appeal from one section of road users to another to observe traffic amenities.





"You ain't fit to drive a super-charger"

DRIVING HINTS FROM EXPERTS

No. 6.—By A. FRAZER NASH

In addition to numerous useful driving hints, our contributor this month deals specially with skids and the correct method of handling them.

COMPARED with the cars on which many of us experienced our early joys and sorrows, the modern car is a dream of simplicity to control.

Unfortunately the difficulties of modern traffic, caused by the enormous increase in the number of road users, more than counterbalance the advantage of improved control. The mere ability to drive is not now so difficult to acquire, nor, in my opinion, is it as important as road experience and prescience as to possibility of accident.

It is more important at first to perfect one's method of stopping rather than to gather steering experience—the latter will come automatically as time goes on. If steering is learnt first, the tendency will be to try to steer out of a difficulty (thereby taking risks) rather than to slow up or stop. Remember it is the point that is learnt first that is best remembered.

Assuming, however, that the earlier stages of starting, stopping, and steering (I put them in what I consider their relative order of importance) are passed, the following suggestions will be found useful in acquiring good driving habits.

1. Always slow up before a difficulty, such as a cross road, a corner, or obstruction; and if a change down is likely to be needed, execute same before reaching the point in question. By so doing you are then ready to accelerate immediately in the event of a clear road, while, on the other hand, if the road is not clear you have the situation well in hand.

2. If possible, always look behind, in addition to signalling, when about to stop, turn in, or pull out. Remember that if there is anyone behind, his attention may be momentarily distracted, and he may not have noticed your signal. If you have any doubt—particularly before turning out—let him pass first.

3. Remember to signal *before* turning.

4. Never pass anyone on a corner, or on the near side.

5. Study the surface of the road you are on, and that which you are approaching. If you see a wet or loose surface ahead, slow up *before* you get to it.

6. Remember that accidents are as likely (and even more likely) to be caused through the thoughtlessness of others rather than from your own ac-



A. Frazer Nash, of "G.N." and "Frazer Nash" car fame.

tions. Look out particularly for cyclists and children.

7. Treat all side-turnings, cross-roads (even minor ones), and "blind" carriage-drives as possible danger points.

Skidding.

In view of the presence of wet and slippery days, some notes on skidding may be of interest. Occasions arise when skids cannot be avoided, so that it is very useful to know how to handle a skid correctly.

This being so, it is a sound plan when you have a good slippery road to yourself to practise skids and the checking thereof. Do not, however, attempt this unless:—

(1) You have the right surface. This should be flat, smooth, with a slippery surface, a level stretch and not heavily cambered;

(2) That you can see a long distance of clear road both ways;

(3) That there are no side turnings, gateways, or houses, from which interruptions can possibly occur.

Having obtained these ideal conditions, a safe skid can then be produced as follows:—

Start slowly (a speed of 8-10 m.p.h. is ample if the surface is right), travel near the middle of the road; declutch and apply rear brakes hard, at the same time turn the steering wheel (preferably to the right), as this is the direction in

which most skids occur on English roads.

If the surface is sufficiently slippery, you will now bring off a gentle right-hand skid. As soon as the skid starts, remove the brake, turn the steering wheel to the left until the car starts to recover, and then bring the steering wheel back to its central position. With an initial speed of less than 10 m.p.h. the car will probably have stopped by this time, but if you have chosen a good surface you really need not exceed 12 m.p.h. to bring off the skid and its recovery.

The confidence gained by being able to handle a skidding car successfully may stand you in very good stead on a future occasion. The tyres, by the way, should be fairly hard to avoid any risk of pulling them off. Remember again, you *must have the road to your self*. If the car does not skid, do not go on trying at higher speeds. It only indicates that the surface is not slippery enough.

When travelling on a wet and strange road, I personally make a practice of testing the surface in this way at a slow speed before attempting any fast running, particularly if the car I am driving has brakes on the rear wheels only.

A good tip to avoid skidding when descending a very slippery hill is to proceed in second-speed, and when wishing to slow up, or stop, to leave the clutch in (with engine throttled down) and apply the brake very gently.

The foregoing remarks are, of course, generalities, and deal with Safety First. Driving from a somewhat elementary point of view. Once the necessary road experience has been gained, my own views are that a fast car with a good acceleration is by far the safest to handle. For one reason, if you wish to pass anyone, it can be done quickly and safely, while you can be well ahead and clear before any difficulty occurs. Another point: on a car with a good acceleration one has no objection to slowing up when necessary, because it is easy to regain lost original speed, whilst with a car of less power and speed the temptation is to keep going rather than to lose a good average speed, a practice which is often responsible for chances being taken and, not infrequently, for the accidents resulting.

TEACHING "BOBBY" TO DRIVE

By CAPTAIN P. A. BARRON

Who, in his attempt to explain the principles of the modern car to an ultra-modern girl, becomes somewhat tongue-tied. His resulting expressions are highly amusing

BY the exercise of much diplomacy, "Bobby" had wangled a small car out of her already over-taxed paternal relative.

She assumed the name of "Bobby" some years ago when she bobbed in obedience to the then prevailing fashion, and, though she has been shingled, bingled and Eton-cropped progressively, the nickname, or snip-name, has remained.

She honoured me by issuing an order that I should teach her to drive, and I obeyed because "Bobby" is one of those ultra modern girls who, though not admired by bishops, are good pals to ordinary sinners.

I undertook my duties seriously, and began with a short lecture as she powdered a charmingly *retroussé* nose while surveying herself in the reflecting mirror.

"Before you can drive really well," I said, "it is necessary that you should understand something about the mechanism of a car. It is not sufficient to know that if you move a certain lever, or press a pedal, certain results will follow. You must know why."

Bobby nodded gravely.

"Exact knowledge is necessary," I continued. "I shall begin by teaching you how the various controls work."

"That's the brake," said Bobby.

I saw that I had been deceived by a somewhat unconventional arrangement, so lied quickly for the sake of discipline.

"I said this 'brake pedal.'"

"You called it the 'clutch.'"

"Well, I meant 'brake.' When you press this you actuate mechanism which causes shoes to expand inside the four brake drums, thus causing friction, which tends to check the revolutions of the four road wheels."

"But this car hasn't four-wheel brakes," said Bobby.

A glance showed me she was right again. "It makes no difference; the principle is the same," I said with a desperate effort to maintain my dignity. "All I want you to understand is the principle. Now we will remove these floor boards so that you can see exactly how the brake pedal works."

I prised up the boards and saw at a

foot brake acted on the transmission, so I replaced the boards before she had a chance of finding it out.

"I will now explain the action of the clutch pedal," I continued.

"You are sure you don't mean the exhilarator this time?"

"When I say 'clutch,' I mean 'clutch.'"

"I see. Just as when you say 'brake' you mean 'clutch,'" she said wickedly.

"Besides, there isn't such a thing

"What's the gear box?"

"It is a mechanical contrivance for altering the ratio between the revolutions of the engine and the road wheels."

Bobby pondered. "Well, why don't you show me the ratio?" she said, irritably.

"The ratio," I replied with forced calm, "is not a thing you can put your foot on, or pull. It's a sort of mathematical expression like denominator or—or a vulgar fraction. It's—it's the sort of relation between something and something else."

"Like a step parent," she said with a sudden flash of intuition.

"It's not in the least like a step-parent. Those sorts of relations are things—"

"They are," said Bobby, laughing.

"—whereas a ratio, or a number of ratios are merely the difference between the numbers or sizes of any sort of thingamajig compared with any other whatyoumaycallit."

"Marvellously clear!" said Bobby sarcastically. "You ought to have been a school-teacher."

"Well, you see now, anyhow. The gearbox has three ratios—that is to say, three speeds, or gears which are engaged selectively. The gears are really cog wheels, and there are a lot of them in the gear box. You may engage a little cog wheel with a big one or a smaller one to a bigger one, and according to the number of teeth or cogs on the—er—the cogs—so—er—the ratio or the—er—the relative differences between the cogs—er—become more different, so to speak." To put it simply, a gearbox is a means of getting different ratios."

"I see," said Bobby hopefully. "I suppose that's why, in the instruction book, they call it the differential."

I said "damn" as a soft aside, but not too softly for Bobby to hear. The word seemed to cheer her for she smiled, and said: "I double that call!"

It is impossible to be angry when Bobby smiles, so I resumed patiently.

"The differential is an entirely different contraption. It is at the back of the car, and its purpose is to help one wheel to go faster than the others when the car goes round a corner."

"I don't know how one wheel can

OUR COMPETITION PAGE.

OUR monthly competition page, started in the September issue, proved such an immediate success that we have made the idea a feature. The awards offered are rather more indicative of a token of appreciation of success than of direct pecuniary value. It is obvious, therefore, that our readers find amusement for their spare moments in trying to solve these little problems. And that is just the atmosphere we desire to obtain.

Have you pitted your wits against those of the artist yet? If not, turn to page 13, and see if you do not find the effort of solving the riddle there set to your liking. It is quite amusing and not too difficult.

as an 'exhilarator'—at least it isn't put into a car. You mean 'accelerator.'

"Well, what does the accelerator, as you call it, do?"

"It exhilarates, I mean accelerates the engine—makes it go faster, you know."

"I see, and I suppose the clutch makes it go slower."

"Not necessarily. If you depress the accelerator and declutch, the engine will race."

"Is that how they drive at Brooklands?"

"Of course not. Do try to understand!"

"I am trying, but you explain so badly. The man at the Motor Show told me this car has three speeds. I suppose that means you can use the brake, the clutch or the ex—accelerator."

"No, no! He was talking about the gear box."

go faster than others when they are all fixed to the same car?" said Bobby, after profound thought. "If the front wheels went faster than the back, they'd come off and bowl along in front of the car."

"It isn't the front wheels that go faster than the rear ones. I mean the wheels on one side go faster than the others when you take a curve."

"So that's how you steer."

"It isn't how you steer. Can't you see, Bobby? It's the same sort of principle as the top of a wheel going faster than the bottom."

"How can it when it's all going round?"

"Well, it does. Can't you see that the bottom of the wheel is on the ground, so it doesn't move at all."

"But it's going round."

"It isn't going round—at least what I mean to say is that the top goes round until it comes to the bottom and then it stays still."

"Then how does it get to the top again?"

"Because—well—can't you see? It only stays still for a little time—just while it's touching the ground, in fact. Then the bottom part goes to the top and the top to the bottom—sort of sideways, you understand, or rather up and down roundways."

Bobby's brow puckered. She glanced at the mirror again, possibly noticed that the expression was not becoming, and smiled. "I see," she said, with a look of radiant intelligence, "so that is what the ratios are for."

"It's nothing to do with the ratios or the differential."

"But you were trying to explain the differ—differential."

"I was, but you muddle a chap up so."

"If you can't explain a simple thing without getting peeved, you'd better stop. You distinctly said that the front wheels go faster than the back when the top parts are not at the bottom because the differential—or what you call it—makes the bottom

part stop. I believe you are pulling my leg."

"Why do they call things such silly names?" she continued. "What's a carb—carbu-something? I saw it in the book."

"You mean the carburetter."

(I admit that I was glad to change the subject.)

"Well, what's it for?"

"To mix the petrol with air."

"Why?"

"Because you have to vaporise petrol and compress the gas before it will detonate."

"What gas?"

"Petrol gas."

"I thought gas came from coal."

"That's another kind of gas—carburetted hydrogen, you know."

"Is that made in a carburetter? I thought they called it a gasometer."

"Gas isn't made in a gasometer. It's only stored there. It is made in a retort."

"I thought a retort meant something catty you say to a friend."

"That's another sort of retort. The kind I mean is really a still, the thing they use in a distillery, you know."

"Well, why not call it a still?"

"Because it's a retort."

"Then you ought to call a distillery a retortery."

"Now, look here, Bobby, we are getting right away from the subject again. I was telling you about the carburetter."

"Well, I'm listening. You said it's like a still, or a gasometer. It looks rather like a little baby gasometer," she said, thoughtfully, looking at the Autovac.

"That isn't the carburetter. That's the vacuum feed arrangement."

"What's that for?"

"It's to raise the petrol from the tank by a sort of vacuum and feed it to the engine."

"Which is the vacuum?"

"My dear girl, a vacuum is like a ratio—a sort of relative thing—a kind of abstract noun, you know. It's

nothing, don't you understand? That thing is partly full of petrol and partly full of nothing—full of vacuum, I mean—or I should say, empty, to make it clearer—and the vacuum sucks up petrol—or I should say the atmospheric pressure in the tank forces the petrol into—"

"Into the retort."

It was at this point that I got rattled.

"Hang the retort."

"Well, the still then."

"There isn't a still or a retort, or a gasometer or a shilling in the slot gas meter in a car. It's hopeless to make you understand."

"I don't believe you understand yourself," said Bobby irritably. "Anyhow, I don't want to know about silly differential vacuums and things. I want to drive, and I'll ask Jack to teach me."

Jack is a person I particularly dislike, and, being rattled, I said so.

"I'll never speak to you again," said Bobby.

But she did.

Three days later I had trouble with my own car. I traced it to a choked petrol filter, but not until I had tested the plugs and the magneto timing and had littered the landscape somewhat liberally with tools.

While I was toiling with grimy hands a car came by. At the wheel of the car, serene and confident, was Bobby.

"Want any help?" she called out, and it seemed to me that there was mockery in her voice.

Jack was with her.

I believe my system of tuition is wrong. I am aware that most modern girls, even those who wear salmon-tinted stockings, can understand mechanism, but with others I think it is better to start by showing them the things they must tread on and the other things they must pull, and leaving principles alone.

I expect that silly ass, Jack, did that.



A FEW LEAPS AHEAD! Mr. O'Sullivan tries out a pair of new balloon rubber heels.

THE SIGNS OF THE MOTORING TIMES

By CAPTAIN E. DE NORMANVILLE

A review of improvements accomplished in the past year is now due. Some of the principal points of interest in engine, coach-work and tyre developments are detailed in the following article

THE Olympian nest is forsaken. The song of the persuasive show-bird is heard no more. And the moment has arrived when a calm retrospect is possible concerning the motoring eggs hatched out.

Dealing first with prices, it seems to me undeniable that we have reached the "rock bottom" of reductions, always supposing that the present high standard of material and workmanship is to be maintained.

Taking value for money as the basis for calculation, one can but note that, so far as medium and inexpensive cars are concerned, there is a striking decrease in price as compared with the corresponding period of 1924. This is most marked in cars of about the £200 class. No marked reductions are apparent in the costly models.

By implication I have already drawn attention to the fact that price reductions have not been achieved by the use of inferior materials, and further to this it must be added that there has been no skimping in equipment.

On the contrary, one of the pleasing signs of the times is the obvious desire of manufacturers to increase the comfort and add to the safety of drivers, by providing equipment which has, hitherto, not been included in the original purchase price.

And these items are by no means exclusively confined to those of minor importance. For instance, front-wheel brakes are often, although not exclusively, provided without extra cost. The general tendency is to treat them as standard. It is to be noted that at least 70 per cent. of present-day cars are fitted with four-wheel brakes. Evidently they have come to stop! The remark not only applies to their function, but also to their future. Their fate trembled in the balance last year on account of the difficulties encountered by ordinary private owners. But these difficulties have all been overcome, and it is safe to assume that the great improvements effected in design will ensure their even universal adoption.

Balloon tyres are almost universal. From the purely personal point of view, this does not strike me as being a matter for congratulation. In my opinion the "semi-balloon" type is much better for all-round requirements.

The man who indulges in motoring prophecy is probably laying up trouble for himself. Nevertheless, I am taking my courage in both hands and expressing the opinion that the vogue of the balloon tyre has reached its zenith, and that before long the "semi-balloon" will come into its own.

Before passing to the tendencies of engine design, I will clear the way by referring to one or two other items which demand attention. It is to be regretted, at any rate from my point of view, that cantilever rear springs apparently are going out of favour. I have always considered this type the best for average use at normal road speeds.

Wire wheels seem to be gaining in popularity. This would be enhanced beyond all doubt if it were not for the trouble entailed in cleaning them.

With regard to coachwork, the saloon is making great headway, and there is a movement towards the semi-Weyman type of coachwork. There is a strong probability that this will become more and more popular as time goes on.

We can now turn to engine development. A great factor is the tremendous progress accomplished by six-cylinder cars. Of course the "fours" still have

it in point of numbers, but the onslaught of the "sixes" on their popularity is very marked. In connection with this point it is to be noted that a large number of inexpensive British-made cars have adopted the six-cylinder engine design. The fact that the price of these cars can stand strict comparison with equal quality "four-cylinders" is, of course, a great point in their favour.

A minor item in engine development is the almost universal adoption of properly designed attachments for starting motors and dynamos—a welcome change from many of the haphazard methods of the past.

There is a definite growth in the number of engines using pump circulation for the cooling water. The word "pump" must be read as including the various types of simplified impellers doing similar duties.

One supposed that the pump had been largely supplanted in recent years by thermo-syphonic water circulation; and its rejuvenation is somewhat puzzling. Certainly I have had no fault to find with the various cars I have owned which had natural water circulation.

With regard to the gear boxes, I find that the four-speed type is distinctly gaining ground on its three-speed rival. This is a development which I have always felt would come about, and indeed have often mentioned my opinion in these columns.

I have purposely left the bombshell in engine design for the end of this article. Need it be said that the reference is to the new sleeve-valve designs produced by the Daimler and Vauxhall companies? Just when we thought the engine had settled down to a battle between four, six or even eight cylinders, along comes this high-efficiency revolution to shake the whole foundation of engine design. The question which arises is: Does this foretell the end of the universal type of poppet valve engine as we now know it? I venture to think it does. But time alone can tell!



"What's become of your brother, Harry?"
"Haven't seen him for nearly a year. He lives across the street."

PEOPLE AND THEIR CARS

A Motoring Medley in Pictures



1



2



3

1.—The Hon. Khan Bahadur A. K. G. Ahmed Thambi Maricair, a member of the Imperial Legislative Council in Southern India, and his 25/30 h.p. Crossley R.F.C. model landaulette.

2.—Mlle. Alice Delysia, the celebrated actress and dancer, who is creating a big hit in the successful show "On With the Dance," is a very keen motorist. She is seen with her 11·4 Citroën landaulette.

3.—Depicting happy owners of one of the new sleeve-valve Daimler saloons leaving the picturesque "Ye Olde Tea Room" of the Bell Inn, Oxted, Surrey, after a refreshing lunch.

4.—Our picture shows H.R.H. the Prince of Wales entering his "New Phantom" Rolls-Royce car after reviewing a detachment of British ex-soldiers at the Retiro Station at Buenos Aires during his recent tour.

5.—Master Robert and the Misses Bunty and Pamela Tolkien are quite expert at cleaning daddy's car. Mr. Tolkien is the general manager of Shaw and Kilburn Ltd., the special agents for Vauxhall, Hudson and Essex cars.

6.—Here we depict a Daimler "Thirty" built for the Queen of Spain. The limousine body, specially designed and constructed by Messrs. Hooper and Co., is painted Royal Blue with gold lines, the interior being finished with gilt and ivory fittings; while Triplex glass is used throughout.



4



5



6

W H O ' S A W A Y A - W H E E L

Picturing the Picturesque



7.—This Overland Standard Tourer, with trailer attached, owned by the Vicar of Hay, regularly drives parishioners into the market town of Bracon. The extra load, which usually means eleven people, makes little difference to the car's performance—a vivid example of economical transportation.

8.—A happy picture of a 20 h.p. Rolls-Royce touring car taking the water splash at Chalfont.

9.—Ancient and modern. A party of Austin "Twelve" enthusiasts inspecting the now disused stocks at Shalford, near Guildford, Surrey.

10.—A pleasant picture of a Belsize owner viewing the beauties of Corfe village and the ruins of Corfe Castle.

11.—The new season's Buick taken in delightful surroundings—and, incidentally a happy contrast of graceful lines.

12.—Whiteleaf village forms an attractive background to one of the new 10 h.p. De Dion touring cars. To use the words of this happy owner, "The car is just lovely!"



RESULT OF THE SEPTEMBER COMPETITION

It is quite evident that the interesting little motor problem competitions which we started in our September issue have, in the vernacular, caught on. As explained below, it is a matter of some difficulty to make the awards



This was the problem : How many parts of a motor car can you see in the picture ?

THE inauguration of THE MOTOR OWNER competitions which we started in our September issue has proved very popular with our readers—though not quite so popular with the Editor, who finds it a matter of great difficulty accurately to judge the efforts sent in. In the particular example under consideration, for instance—namely, the problem picture in the September issue, one or two competitors actually sent in more parts of a car than were really scheduled in the picture by the artist! Consequently it becomes a matter of difficulty correctly to assess such clever efforts and to know whether an alleged part, not intended to be in the drawing, could accurately be accepted as being there, for the purpose of the prize award.

To guard against the possibility of several entrants tying for one of the first prizes, we announced that the first correct, or the nearest to correct, solution extracted from a bag should obtain the award. Consequently the Editor has done his best to make a solution to a difficult problem, and the first three awards have been allocated as follows :—

1st Prize.—Miss K. A. Morton, Kewferry Hill House, Northwood, Middlesex.
2nd Prize.—R. Vandy, Esq., Brewster Road, Leyton.
3rd Prize.—A. R. Mellor-Haigh, Esq., Holmfirth, Yorks.

These prize-winners receive, respectively, a hand-finished MOTOR OWNER mascot, value five guineas; a cheque for one guinea; and a cheque for half a guinea, all of which prizes have been despatched.

THE unfortunate Editor is again in trouble with regard to the consolation prizes, for which a dozen packs of MOTOR OWNER Mascot playing cards were promised. Here, again, we initially announced that the picking out of a bag, taken in conjunction with the approach to accuracy, should be the basis of award, but on going through the entries we find many people actually tying in both number and accuracy of selecting the parts, so that on second thoughts it hardly seems quite fair to allow the element of chance to rule the receipt of our little consolation award. Incidentally these playing cards, made for us by Messrs. Chas. Goodall and Son, Ltd., are the best quality obtainable, of the linen variety with gold edges and packed in padded boxes with gold monogram.

In view of the above facts we have decided, therefore, to give all those who tied for the next dozen best, a pack of cards each—and these also have been despatched. These results are scheduled out below :

4TH PRIZE (TIES).

W. Bobbett, Esq., 1, Barnpark Road, Teignmouth; and E. Perryman, Esq., 27, Alacross Road, South Ealing, W.5.

5TH PRIZE (TIES).

Mrs. Patience Isitt, The Downes, Altringham; and Neville Hall, Esq., Hall Green, Birmingham.

6TH PRIZE (TIES).

Mrs. Eileen Nettleship, The Manor House, Market Raisen, Lincs; and H. Dake, Esq., Combermere, Whitchurch.

7TH PRIZE.

E. Page, Esq., Iwood Place, Warbleton, Sussex.

8TH PRIZE (TIES).

Miss Margaret Webster Jennings, 21, Avenue Road, Belmont, Surrey; and M. Lovelace, Esq., Beechwood Avenue, Kew Gardens.

9TH PRIZE (TIES).

M. G. Barclay, Esq., Elmfield, Harrow-on-the-Hill. S. G. Oshiston, Esq., Berkeley Avenue, Bristol. W. Taylor, Esq., 4, Atlingworth Street, Brighton.

T. A. Rees, Esq., 27, Garden Suburbs, Dursley.
W. Taylor, Esq., 369, High Street, Lincoln.

10TH PRIZE (TIES).

Mrs. Violet Bryan, Furze Hill House, Hove.
Mrs. A. Gray, Millbank House, Buckie, Banffshire.
Alexander Gray, Esq., Millbank House, Buckie, Banffshire.
Surgeon Lieut. H. Normand Barnes, R.N., Royal Naval Barracks, Portsmouth.

11TH PRIZE (TIES).

G. M. Gray, Esq., Corn Mills, Buckie, Banffshire.

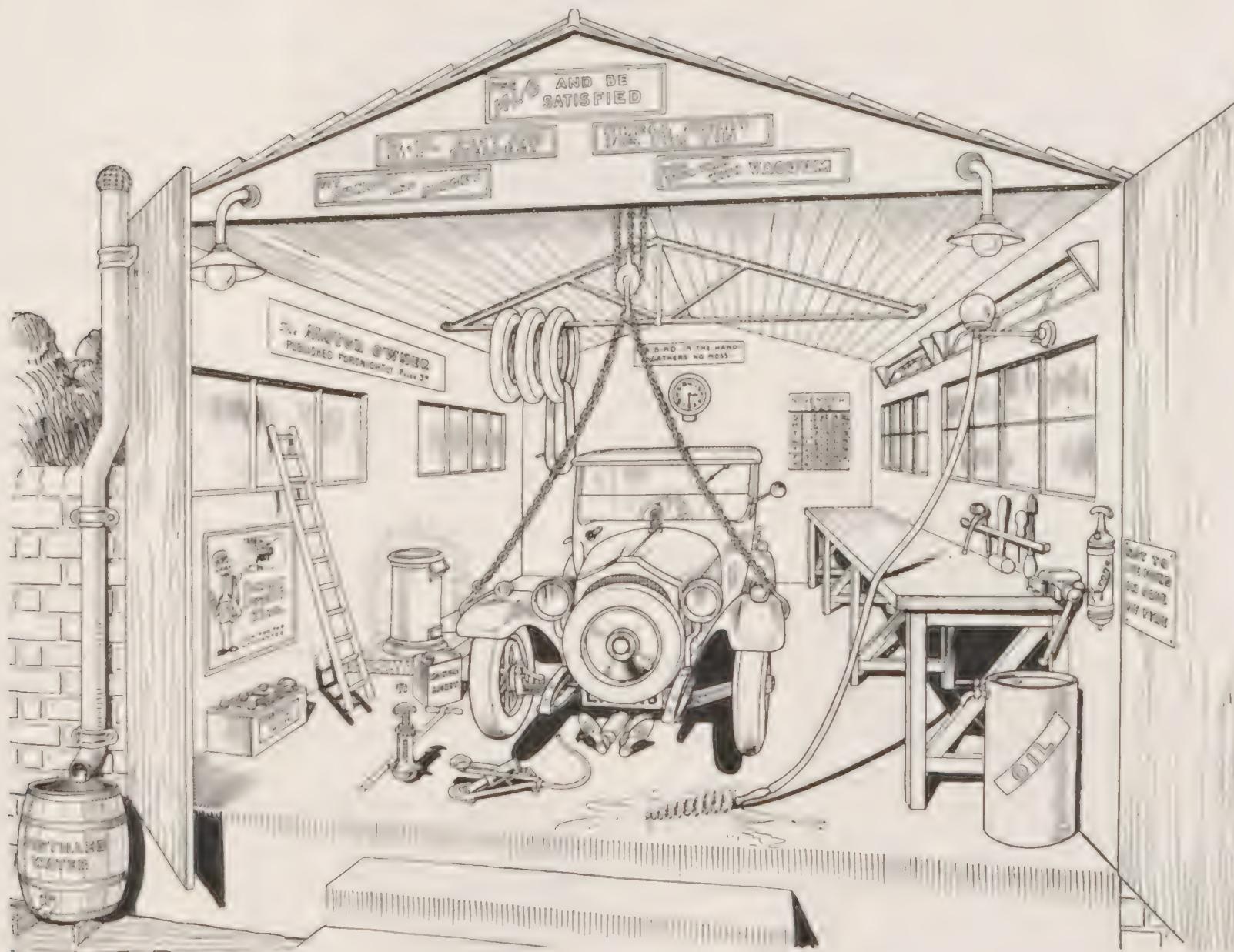
C. Mayon, Esq., Hallwell Road, Bolton.
S. Cook, Esq., Taylor Street, Consett, Co. Durham.

12TH PRIZE (TIES).

Miss G. Coventry, Sewington, Swymbridge, N. Devon.
A. Worth, Esq., Ravensbergh, Strand.
Miss Joyce, S. Staverton Road, N.W.2.
G. Duncan, Esq., 11, Bonaccord Square, Aberdeen.
S. P. Brown, Esq., 120, East Road, N.1.
Sub-Lieut. H. G. D. Oliver, R.A.N., Royal Naval Barracks, Portsmouth.
T. A. Guest, Esq., Hawkesley Mill Lane, Northfield.

OUR COMPETITION PAGE

We are genuinely delighted that our amusing little competitions are proving so interesting to our readers. Here is another one the bulk of which is not too difficult for the average motorist



How many glaring mistakes can you pick out in the above picture?

A NOTHER problem picture for your spare moments! All you have to do is to pick out the glaring mistakes in Mr. MOTOR OWNER'S garage, his car, and their equipment. Some of these errors are glaring—as, for instance, blocking up the radiator with a spare wheel: even the best regulated motor would get over-heated with such treatment! How many glaring mistakes can you pick out in the above picture? Just write them out and post your attempt to the Editor, THE MOTOR OWNER, 10, Henrietta Street, Covent Garden, London, W.C.2. There is no entrance fee. All attempts so received up to and including the first post on December 1st will be placed in a

sack, and the first correct solution withdrawn will get the first prize—a MOTOR OWNER Mascot. The second prize of a guinea will go to the second successful attempt so withdrawn, and the third prize of half a guinea to the third.

In the event of no competitor completely solving the puzzle, the prizes will be awarded to those who get nearest. There will also be one dozen consolation awards of packs of MOTOR OWNER Playing Cards, which are of the best quality obtainable, with THE MOTOR OWNER Mascot on the back.

The prize-winners in our October competition will be announced in our next issue, to be published on December 1st.

PIT YOUR WITS AGAINST THOSE OF THE ARTIST.

LONG CRENDON, AN OLD-WORLD—

A PICTURESQUE
VILLAGE
POSSESSING MANY
HISTORICAL AND
OTHER
INTERESTING
ASSOCIATIONS.



THE village of Long Crendon is one of those picturesque old-world villages to be found only well off the beaten track. It is situated on the top of a long and pretty hill about two miles north of Thame. The village street presents a picture of peace and solitude. It is full of quaint little cottages, roofed by straw-thatch or mellowed old tiles, as well as many other happy corners tucked away between the many creeper-clad buildings, with overhanging roofs on either side of the road.

The atmosphere at Long Crendon is full of exclusiveness, and the village seems to be out of touch with all worldly things. It is very little known that needles were first made in this tiny Buckinghamshire village, and the trade was at the height of prosperity even so late as in the "fifties" of the last century. As a matter of fact, many of the productive tools and implements are still in the possession of some of the older inhabitants, these old and interesting relics of this early commencement of the larger modern industry having been handed down from generation to generation. Needlemaking in Long Crendon, according to one of the older worthies, was "discontinued because of the lack of trans-

Barely two miles from the main London-Thame Road, Long Crendon, Buckinghamshire, is one of the most delightful, if least known, links with "Ye Merrie Olde Days of Englande." Beside offering all the charms of a typical old English village, with its cobbled streets and straw-thatched dwellings (No. 1), and that ever pleasant old-world atmosphere—Long Crendon's history goes back even to before the days of Henry VI, whose Court House (No. 2) stands in an excellent state of preservation to the present day.

— CORNER OF BUCKINGHAMSHIRE

TO THE SCEPTIC—
DREAM
COTTAGES DO
EXIST, AS WITNESS
THESE
DELIGHTFUL
PICTURES.



port in those early days, but," he adds, "very soon after the production was discontinued, the railway was laid down close by the village side."

A very handsome and interesting building is the Court House, which was in use as such in the fifteenth century. The finely timbered upper chamber is now used for various parochial activities, and in spite of the ancient log floor, delightful country dances are occasionally held therein, a handsome grand piano providing the necessary music. Courts were held here as long ago as Henry the Sixth's time, but one wonders how the various dignitaries climbed those steep wooden stairs which lead to the court rooms without shedding some of their ceremonial regalia. On the lower floor, the space has been converted into very comfortable dwelling rooms, as many of the ancient features as possible having been preserved.

The Court House, fortunately, has been saved from going to ruin by the National Trust, which is responsible for its happy restoration.

Quite close by is a fine old church in which the beautifully decorated tomb in the south aisle, to a Lord of the Manor in 1626 and "Dame Jane his wife," is an outstanding feature of interest. The font is a particularly fine one, with couchant lions carved upon it at the base.



There are numerous quaint and picturesque corners throughout the village (see Nos. 3, 4, 5 and 6), while No. 5 presents a happy example of an old "chinney corner." In No. 7 can be seen the interior of the Court House, and the picture clearly illustrates the log-floor and the wealth of timberwork embodied in this centuries-old building. Nos. 8-11 provide further views of this delightful spot, while in the last scene a party of motorist visitors turn the bonnet of their car homewards after a pleasant sojourn in this delightful Bucks village.

AN INTERNATIONAL MOTOR LANGUAGE

By R. P. HEARNE

Why not a Standardised Code of Words for Motorists?

WE are only at the beginning of a great and world-wide era of motor travel, and the value of this international circulation will be so great that I think steps should be taken to foster it in every way. This year there has been an immense increase in the number of British cars taken on foreign tours, and very soon we may see foreign motorists coming to this country in ever growing numbers.

To all this development the language difficulty is the great bar. The Britisher is a poor linguist as a rule, and in the chronic muddled state of Europe too much is expected of a man if he is asked to know all the languages spoken. To know and speak French passably requires much study and a good deal of regular practice, as all living languages are constantly changing, and new idioms, phrases and words are coming into use.

Repeat this process for German, Italian, Spanish, Dutch and the other languages and dialects of the twenty odd independent countries of Europe and one sees that the task of studying them all would fill a man's lifetime to the exclusion of all else.

Indeed, I have long felt that the language barrier in Europe has been one of the most potent causes of international distrust and enmity. The accidental use of the wrong word must often have led to serious mistakes, if not to disaster. Take a small example from motoring. The French word for "petrol" is "essence," but there is a French word "petrole" which means "petroleum" or "paraffin." The main fact which keeps British motorists from getting lamp oil when they ask for petrol in France is that lamp oil is not sold by garages. Otherwise there would be terrible trouble. We can also pity the Frenchman asking for "essence" in England.

Even the compass markings are different through lack of standardisation. Just look at the confusion:—

British, N.S.E.W.
French, N.S.E.O.
German, N.S.O.W.

The letter "O" indicates "West" in French and "East" in German, and it is easy to see the mistakes which may result when one crosses from France to Germany, or when one goes through a region like Alsace, where there is a

mixture and a conflict of the two languages. Compass points are not of much importance to the motorist, you will say, but the example is worth giving as illustrative of the general muddle.

It is rather fortunate in motoring, and even more fortunate in aviation, that so many French words connected with these pursuits have become more or less internationalised, for the reason that motoring and aviation were first developed in France. But the tendency has been for each country to replace foreign words, and to-day we have coined our own terms for French words which were generally used by us in the early days of motoring.

Thus, unless something is done we shall have the international word disappearing from the motor phraseology, and a multiplicity of new motor words taking their place in the Babel of Europe. Just contrast this with the continent of America, where there is one universal language despite the fact that millions of people from all the nations of Europe have poured into it within a short space of time.

A universal language for the simple and material facts of life is a labour-saving matter. Applied to international travel in Europe it would mean little more than the standardisation of a few hundred words.

The Englishman being the worst linguist, it would be well to take most words from the English, but the general rule would be that the most expressive, simplest, and least confusing word would be adopted. We have the word "garage," the same in both English and French. This is an excellent example of a French word which could be standardised the world over. The English word "tyre" is also deserving of international use. So, by a process of selection, we could build up our international travel and motor glossary.

Magnificent work has been done by the Society of Motor Manufacturers and Traders in standardising measurements and dimensions for various parts of the car mechanism, and we should think it barbarous to-day if every manufacturer used different sizes of nuts, bolts and screws.

If the S.M.M. and T., in conjunction with the A.A., the R.A.C. and the foreign organisations, joined forces to give us standardised words for inter-

national use we could soon establish a most useful glossary so that the road traveller in any civilised country could make known his requirements easily and with small chance of being misunderstood.

Only a few weeks ago I saw an English motorist in France drive at high speed past a notice board which bore the word "Ralentir." It was the warning for a dangerous and concealed corner, but I expect the driver thought it was an advertisement or the name of a village. Now, if we had the English word "Slow" internationalised all over Europe as a warning sign, we can realise that in a very short space of time motor travellers in every country would have a great factor of safety.

There will be word purists who will object to this method, even when we seek to apply it only to a few hundred of the most useful words connected with road travel, motoring, and aviation. These cranks say that the languages are being spoiled by foreign words. We have an excellent reply by taking the case of music, where a single system of notation, and in effect a single language, gives the whole world the key to all music. Think how backward and how narrow our music would be if each country had its own musical language.

I should like to see the motorising organisations take up this matter of an international motor code, the first step being to select the words which are most required, and the next being the elimination of words or phrases which lead to confusion, as in the case of "essence," "petrol" and "petroleum." Finally, there would be very good international work done when by some fair plan the new code of words was agreed upon and put into use.

It is really an important matter for Europe. We are in a bad way as compared with America, and something like a common and united effort must be made in Europe to build up good will, understanding and humanising influences. By that way, too, general security and prosperity will be hastened. Even starting only with France we can see how much better it would be for both countries if more Britishers toured in France, and more French people toured in Great Britain. More facilities are needed to develop this traffic, and make it safer and easier. The international code would help much in this respect.



KIRKSTONE PASS

Kirkstone Pass in Westmorland is well known to motorists as a test hill and is frequently included in the routes of reliability trials. It is $3\frac{1}{2}$ miles from Ambleside, and rises to a height of 1,500 feet above sea level. The steepest gradient is 1 in $3\frac{1}{2}$.

Although Kirkstone has lost much of its old-time terrors for motorists, it presents a formidable climb even for modern cars, and a pure, powerful fuel is necessary to ensure a "clean ascent."

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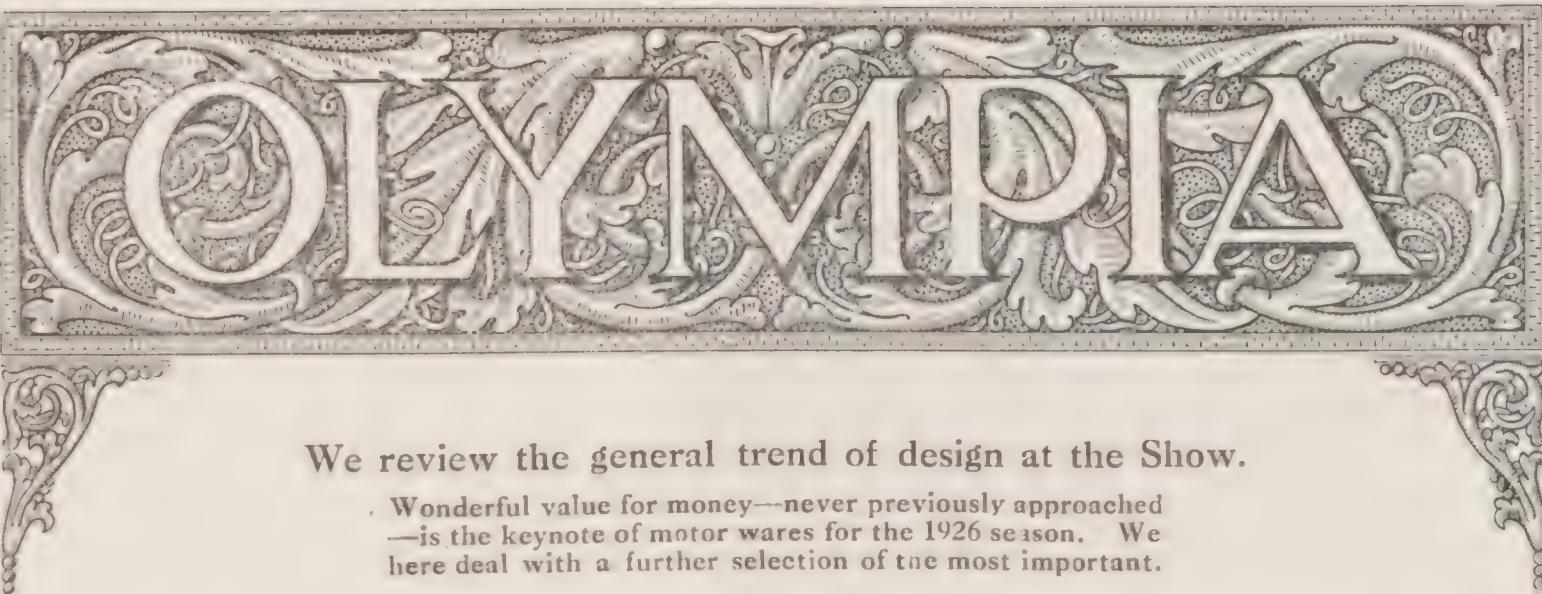
ACTON VALE

104



MOTORS LIMITED

LONDON, W.3



We review the general trend of design at the Show.

Wonderful value for money—never previously approached—is the keynote of motor wares for the 1926 season. We here deal with a further selection of the most important.

THE Olympia Motor Show, that brilliant finale to the long and feverish labours of all branches of the motor industry, and an event so eagerly awaited for by the world's motoring community, has come—and is gone! It is gone, however, only in the sense that the wonderful array of auto vehicles, representing practically every country under the sun, has now been broken up, leaving not the smallest trace of that spectacular display of cars of every shape and size, together with a maze of accessories and components which were housed beneath that huge Olympian roof.

What it has left behind, however, is a vivid medley of thoughts in the minds of the hundreds of thousands of men and women who passed through those ever-clanking turnstiles, and who, in the lull following the storm of brilliance, variety, and value for money, are now endeavouring to recover from the whirl of Motor Show bewilderment. It is a matter of amazement that the visitor faced with such a concentration of the products of the world's motor industry can select that vehicle, or that component, which is the most advantageous to his or her requirements. Yet from statistics which we have before us we see that in many instances exhibitors' entire new season's output had actually been disposed of days before Olympia closed its doors; while others, probably not quite so fortunate, readily admit that, at the least, the results obtained vastly exceed their expectations.

Reviewing the show from all aspects, we find that the outstanding feature of the Exhibition took the form of pro-

nounced detail improvement rather than of material or radical changes in design, and by careful comparisons and selections we are able to give the reader some interesting facts regarding the general trend of automobile design, and of the features which are finding favour, or otherwise, with the motoring public.

Commencing with engine types, we find that while the majority of cars are of the four-cylinder design, six-cylinder engines are slowly but surely gaining headway. In simple figures the percentages are approximately: 4-cylinders 60 per cent., 6-cylinders 30 per cent.; the remaining 10 per cent. covering all other types.

Another feature which is receiving added attention is the four-speed gearbox. Notwithstanding the fact that the average owner of a car so fitted invariably moves off in "second," he derives considerable satisfaction from the knowledge that in case of emergency, such as when touring in mountainous districts, or when the car is heavily laden, he has in reserve a reliable low-gear ratio.

Now in the matter of brakes, two years or so ago the most common pattern was the rear-wheel type. This practice, however, is now conspicuous only by its absence, the modern practice being brakes on all four wheels, while in some instances there is an additional brake on the transmission mechanism. Outstanding braking principles are the Rolls-Royce "six-wheel" brakes—that is to say that in addition to brakes on all four wheels there is a duplicate set on the rear wheels which are operated by the hand brake lever; the Chenard Walcker car, which has brakes on the front wheels only, but there is also a powerful braking effect to the rear wheels by an efficient transmission brake. Other prominent types are the Lockheed hydraulic principle, the excellent Studebaker practice, and the extreme neatness of those fitted to Daimler cars.

Balloon tyres continue to gain much favour with motorists, both new and old, and are probably the most generally used.

Two exhibits at Olympia which merit special reference are the new sleeve-valve Daimler and the "New Phantom" Rolls-Royce.

Readers of THE MOTOR OWNER, however, are fully acquainted with these vehicles, searching road tests of each having been carried out and reported in recent issues. Nevertheless, for the benefit of new readers, we give below a few generalities of their respective qualities. In addition to the famous 30 h.p. and 45 h.p. Daimler models, there are now a new series of high speed engines of the new sleeve-valve principle, a design which permits, by



The three-litre six-cylinder Sunbeam super-sports four-seater is a luxurious vehicle.

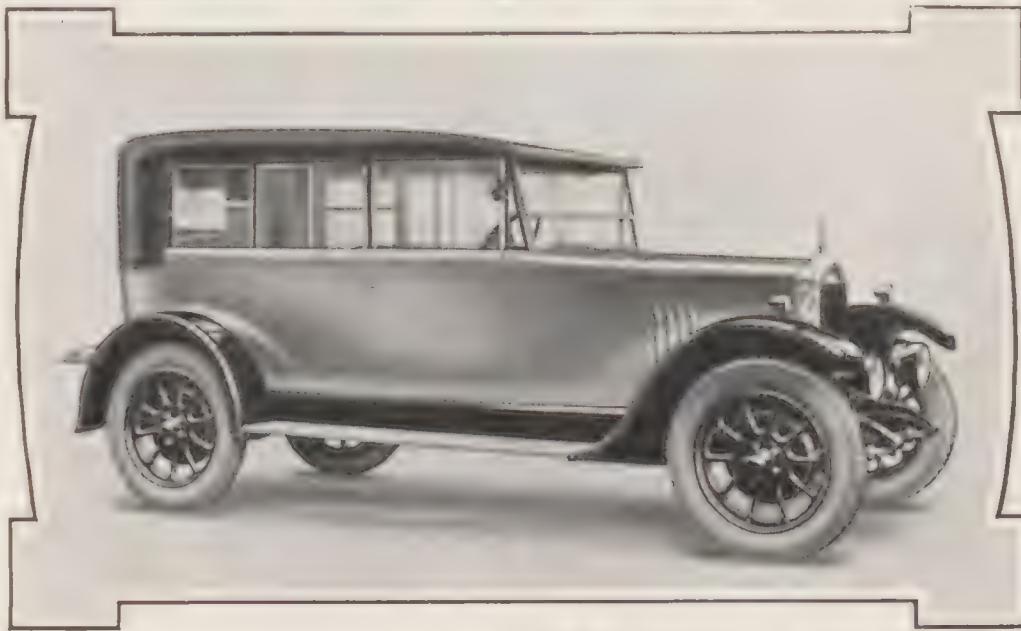
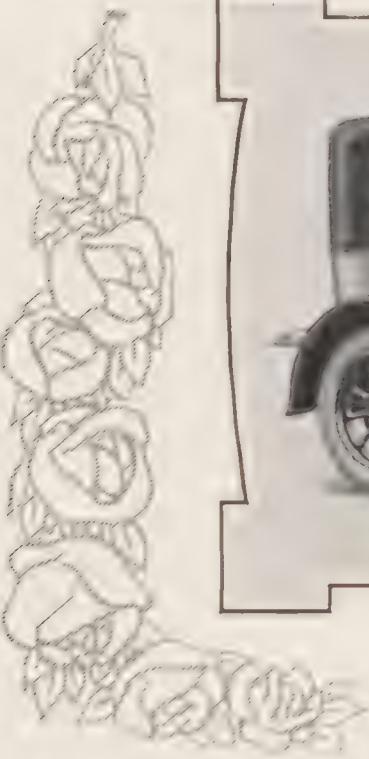
Also, with the "six-wheel" braking system, maximum degree of safety is always assured.

Circumstances do not permit of a complete review of all the exhibits at the Show, so that we must deal now only with those models which, through lack of space, found little or no place in the extensive review of the Show which appeared in last month's issue. For instance, there is the new two-litre Lagonda, a model which received very marked attention on its stand. It is an entirely new vehicle, endowed with many novel features.

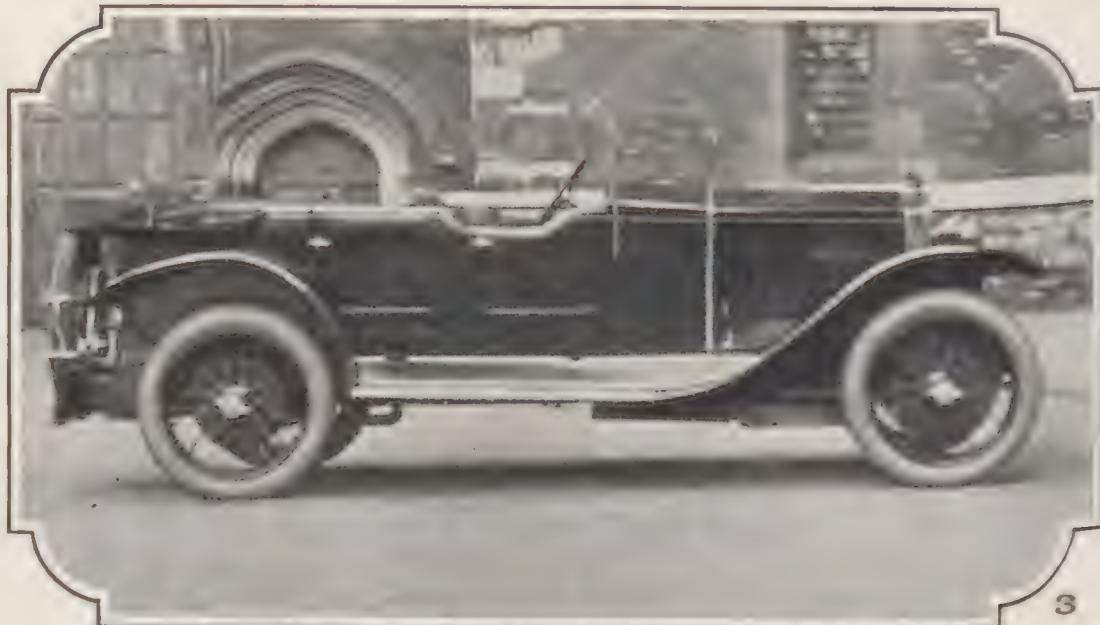
Rated at 12.9 h.p., the four-cylinder engine has two overhead camshafts, and a cubic capacity of 1,954 c.c. The crank-case and cylinder block are cast in one, and a marked feature throughout the



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sliding steel valves, much greater engine revolutions and, consequent thereupon, a greatly increased power output.

Although the cubic capacity of the "New Phantom" Rolls-Royce engine is considerably greater than its sister model, the "Silver Ghost," the R.A.C. rating, and therefore the taxation, have been reduced. This has been obtained by employing a smaller bore with a longer stroke, the respective dimensions of the two engines being: "Silver Ghost"—bore 4½ in., stroke 4¾ in., capacity 7,410 c.c., R.A.C. rating, 48.5 h.p. "New Phantom"—bore 4½ in., stroke 5½ in., capacity 7,568 c.c., R.A.C. rating, 43.3 h.p. The newer engine, therefore, is also capable of an increased power output, while being rated lower than the former type. The improved type of combustion chamber, the position of the sparking plugs, and the use of overhead valves have been responsible for a 33½ per cent. increase of power at 2,250 revolutions per minute. Another point of difference lies in the ignition, which, although still of dual (battery and magneto) type, is now arranged with an automatic and positively synchronised advance and retard. Cooling is by pump, with hand-operated shutter in conjunction with a thermometer on the dash instead of automatic thermostatic regulation of temperature.

design of this new and speedy car (something like 80 m.p.h. can be obtained) is the embodiment of a maximum degree of accessibility to all vital spots.

Adjustments are easily achieved, and further excellent features are the improved lubrication and four-wheel braking systems. This new Lagonda is obtainable with a variety of bodies, while there is still, of course, the popular 12/24 model, also to be had either as touring or saloon models.

Another exhibit which received more than normal notice was the new 7 h.p. Fiat. Rated at 8 h.p., with overhead valves, 4 cylinders of 57 mm. bore and 97 mm. stroke; Fiat patents, carburetter, dynamo lighting and electric starting; steel artillery wheels, and four-wheel brakes, this new



5.—Here is an exceptionally smart three-litre Bentley with a Weymann Saloon body by Gurney Nutting.

6.—Studebaker cars are excellent examples of high class car construction. The model illustrated is a Standard Six Coachbuilt Saloon.

7.—The 23/60 Vauxhall, with "Kington" five-seater body, is a touring model of proved efficiency.

8.—The Swift two-seater is a British vehicle which has gained an immense popularity with the motoring public.



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light car is good value for money and, moreover, is backed by the proved Fiat reputation for high efficiency.

Another entirely new vehicle is the Diana "Straight Eight," which, incidentally, is made by the makers of the now famous Moon 6-cylinder car. Rated at 29 h.p., the Diana has side-by-side valves, while the cubic capacity approaches the four-litre mark. There are three forward speeds and a reverse, a Borg and Beck single plate clutch, Delco lighting, starting, and ignition, and four-wheel brakes of the

same pattern as adopted on the Moon chassis-Lockheed hydraulic. Incidentally, we are hoping shortly to give readers a review of the performance of the "Straight Eight" Diana on the road.

Further interesting models are briefly described in the following lines, while other noteworthy vehicles form the subjects of our illustrations.

The Locomobile (lineal descendant of the famous pioneer steam car) is very well known as a first-class car in America, and now makes its appearance commercially on this side of the Atlantic. It is a straight-eight of 25.3 h.p. rating, with Lanchester vibration damper, four-wheel servo brakes, rubber spring "shackles" and many other refinements.

No material change has been made in any of

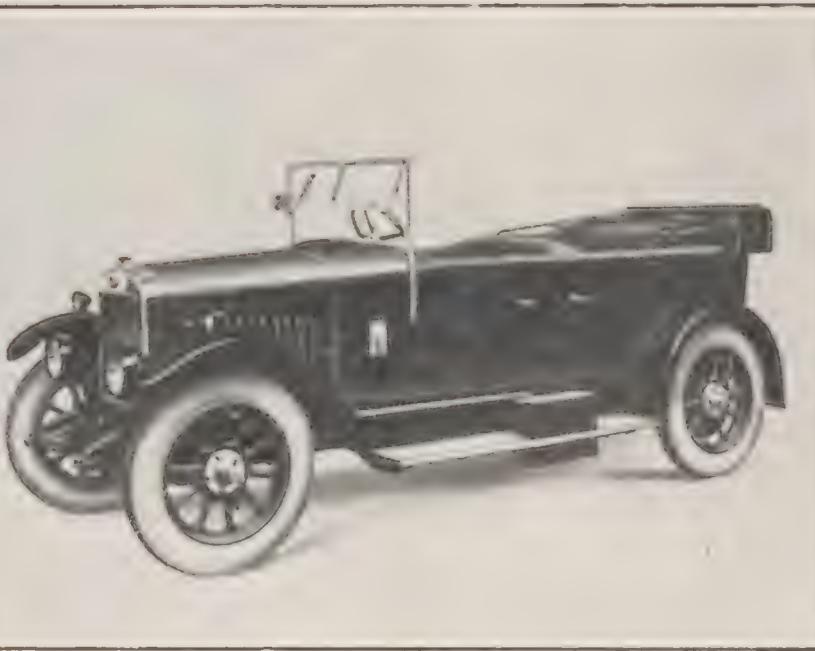
the six-cylinder Flint models, the most notable of which perhaps is the Light Six, with its Lockheed braking system embodying internal shoes. A very nice brougham body is standardised on this chassis.

The latest De Dion departure is of considerable interest. This is the new 10/20 h.p. with four-cylinder 62 mm. by 110 mm. engine, four-speed gear-box and four-wheel brakes. Its equipment is very complete, its construction eminently sound, and its price quite attractive.

Hillman come forward with an entirely new 14 h.p. model, having a four-cylinder two-litre engine and a chassis following standard lines and, of course, up to date in all details. With its 9 ft. 4 in. wheelbase, it is well capable of dealing with all ordinary types of bodywork and is reported to be unusually fast and lively on the road.

As might be expected, the popular 12/24 h.p. Lagonda, in its open and saloon forms, has been brought up to date by the addition of four-wheel braking. At the same time a new 14/60 h.p. two-litre four-cylinder type has been brought out, overhead valves being amongst its features. Its rating is 12.9 h.p.

The 11 h.p. Standard "Piccadilly" saloon, which has already created for itself such a splendid vogue, will be sure to add to its popularity in its 1926 guise. For a short wheel-base chassis it offers unusual roominess and is thoroughly complete. The 14 h.p. model, with



The 14-30 Cluley four-seater touring model is good value for money at £345.

various types of body, should also gain popular favour.

Amongst Italian cars the O.M. is



The 11.4 h.p. Citroën with three-seater cloverleaf body is quite an economical and a serviceable model.

rapidly making a name for itself in this country. It is a moderate-sized six-

cylinder, characterised by great vitality. The chassis follows standard lines, but the usual Italian finish is shown in its many interesting details.

As an extremely economical and all-round efficient light car the Jowett occupies a high place in the esteem of all motorists. The engine is a valanced two-cylinder horizontally opposed, with unit gear-box. A newly introduced model is the four-seater coach, whose standard of comfort is remarkable for its price.

A Boon for Drivers.

The Automobile Association has installed a number of A.A. super roadside telephone boxes which, in addition to affording the usual A.A. roadside telephone facilities for motorists, provide a welcome innovation in illuminated signposts.

Erected at important cross-roads, they are larger and higher than the ordinary A.A. telephone boxes now ^{so} familiar to road users. In addition to the names of towns or villages, and the mileages, the road classification is also shown.

The arms of the signposts are illuminated after dark by lamps using either low pressure carbide or, if available, electric current.

The method of illumination, coupled with the bold lettering of the signpost arms, enables road information to be read after dark at considerable distances by passing motorists.



Here is the new 14 h.p. Armstrong-Siddeley fitted with a four-door—four-seater "Sandown" body. It possesses quite pleasing lines, as also does the 16/50 h.p. Calcott four-five seater which appears on the right. This latter model, at £445, represents an unusually attractive proposition.

MOTORING IN THE LAND OF MANANA

By A. PEAKE

Our contributor explores Yesterday in the land of "To-morrow," in the land of the Moor and the Don, and beckons us to follow in his enticing wheel-track

PERISH the thought that a widespread knowledge of the Spanish language is necessary in order to motor in Spain. We three Musketeers of the Motor toured pretty extensively there, on John X's vocabulary of practically only two words—*agua caliente*. Of course we found them very useful here and there, where an extensive use of hot water is not so much a matter of course as it is at home. We added a little to our dictionary *en route*, notably "pesetas" and "mañana," the extended meaning of which latter being "Never do to-day what you can put off till to-morrow." This is a national characteristic; the former is a world-wide one!

If you be a true wanderer you may let your heart beat high as you turn your back on Gibraltar—that fascinating splash of England dropped on a giant rock—and your nose to Algeciras. The Spaniards have, besides their beautiful manners and easy-going charm—their mañana-ness, as John calls it—a lovely country and a wealth, almost a glut, of Yesterday.

You will bring away wonderful memories, and these, after all, are the ultimate dividend of all investment. Forest, rock, and mountain, priceless relics of the Roman and the Moor; and over, through, and around all, the high, golden sunlight, with masses of flowers vividly gay, orange trees in fruit or flower.

True, you can mar your mental pictures by a bullfight if you be so minded. But why? Few English people will enjoy the sight of a bewildered bull, pricked and jabbed into anger, that it may gore a blindfold and terrified old horse. One is left amazed and hurt. I found myself an inadvertent witness, from the top of a high hill whither we had wandered to admire the landscape. It proved to be a point of vantage for a free view down into the roofless bullring, of this ghastly spectacle. What

it must be at close range one prefers not to imagine. Having seen a horse, who was himself a tragedy, gored once and dragged to his feet for a second attack, I made a hasty retreat down the hill.

Nevertheless, one may inspect a bullring in its unoccupied moments, with much interest, and, leaving the attractions of Algeciras, which is a good jumping ground for inner Spain, we find a magnificent specimen at Ronda. It is probably a gladiatorial amphitheatre of the Roman days.

In any case, one would not miss Ronda. The scenery thereto is unforgettable: forests of cork trees and olives, succeeded by rocky gorges and awesome chasms. The road to Ronda, perched 2,500 feet high, is a prolonged magnificence.

The old Roman gateway in this delightful town will delight the seeker after antiquities, while for the lover of natural beauty there is El Tajo, a stupendous ravine. One may seek far for a panorama to equal that which awes one from this eerie of Beauty.

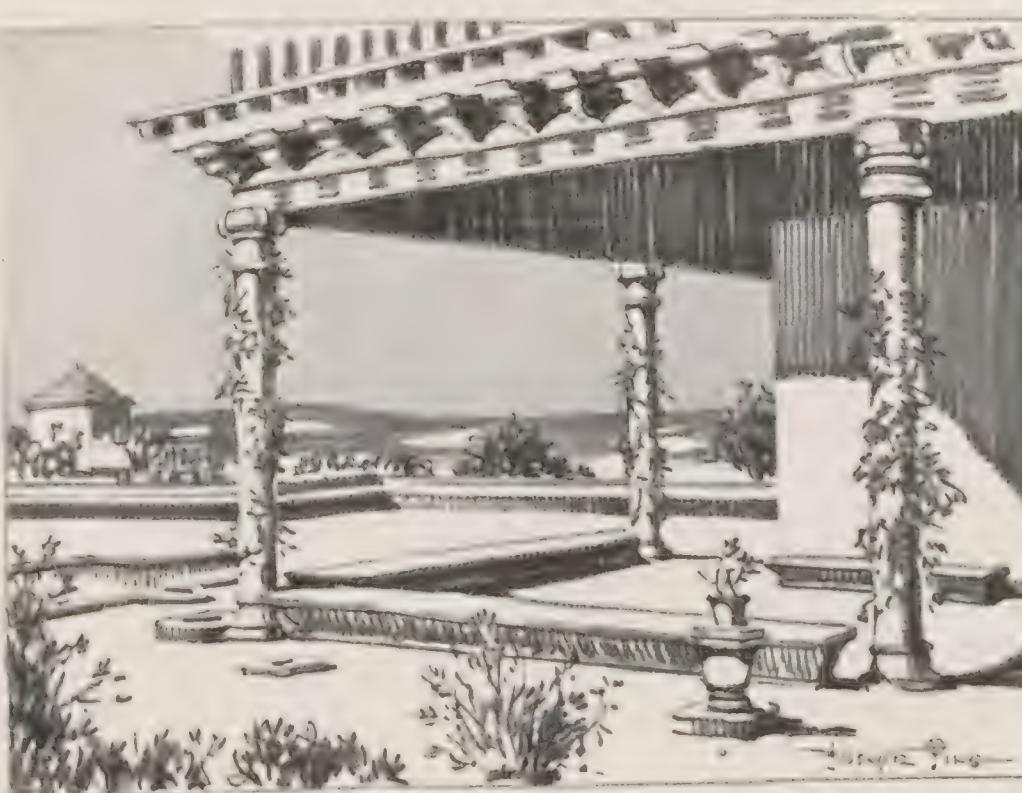
And, in addition, there are at least two hotels which are, to my certain knowledge, "sin falta"; which, being interpreted, means you are uncommonly sorry to leave them. A hotel which

pleases John will please anyone, and he simply would not leave. At first we thought the ravine was the attraction, but we found it was the *langousta*, a tender and delicious little lobster. Finally, we pushed him into the car with a claw in his hand, for the road to Málaga was beckoning us. We shall never forget the grandeur of that run, down, down, down towards the sea . . . from gorge and chasm to oranges and lemons, cypresses and palms, a tropical luxuriance. Every kind and sort of beauty is poured out and overflowing.

It is worth while to stop a couple of days at Málaga. I have seen roses blooming in profusion in March—blooming in happy sunlight and gentle breezes, by the side of the shipping. Think of that next time the winds of Merry England are freezing you to your innermost intelligence—and get your car out of its curl papers. After all, as John says, there are pleasanter ways of getting a red nose than March winds. Which reminds me of an unseemly incident when we were invited to the cellars of a famous wine merchant, and entertained so hospitably that we walked home arm in arm, slightly exhilarated, singing "Rolling down to Rio." John says there isn't a country in the world "has anything on Spain" for hospitality.

After which we rolled down to Granada. The road is good, the journey short—for a car as good as you will take; and Granada is the top note, so to speak, of Spain—that is, Spain at her most picturesque and historic. Although one of her oldest cities, and the ancient Moorish capital, heir to the Alhambra and other marvels, it is also quite a lively and busy town, boasting excellent hotels and amusing cafés.

There is, somehow, a touch of the theatre about Granada, enhanced possibly by the romantic, brigand-like cloaks of the men, as well as by



La Casa del Greco. One of the many fascinating buildings to be seen at Toledo, a mediæval city, decayed but still defiant on her high hill.

the snow-capped Sierras keeping watch over the town.

To wander through the narrow paths of the cave-dwellers' quarter, where the gipsies still live rabbit-like in burrows in the hillside among the prickly pears, is to wonder if one has been transported to some long distant century.

Nor can one emerge from the Alhambra without a curious feeling of having "come back" from the dim past.

This old Moorish palace is a triumph of art and an epic of romance; one which, however, had remained singularly unappreciated by its inheritors until Washington Irving "discovered" it. The word is really almost justified, for in those days the place was drifting into cureless ruin, inhabited by one old caretaker and her family. However, as John said, counting up the toll of pesetas which had been extracted from him, if the prophet were without honour then, the honour is certainly not without its profit now!

But the exploration of the Alhambra is not to be valued in pesetas, even had they been one's own instead of John's!

Outwardly she is no flaunting beauty, this palace of the Moorish kings; but she chose her setting well, on a tree-clad hill. She is like some sorts of women, clever and still, who become more beautiful as you know them more. She certainly beckons you to pay her homage—and if she didn't the guides would, to pay them pesetas!

Within is beauty enough and to spare, notably the Courts of Myrtles, of Lions, and of the Alberca; the Halls of Justice, and of the Ambassadors, from one of whose windows Queen Aisha escaped with her two sons, during the turmoil of that war which the eternal sex triangle had set alight. For the fall of the Moorish kingdom of Granada, and the eventual triumph of the Spaniard over the Moor (which was celebrated by a special service in St. Paul's in 1492), were in the first place only the story of one Zoraya, a slave, and Abdul Hasan, a king who loved her, and of Aisha his wife, who refused to be complacent!

Two factions arose, one for the king and one for the Queen, who, with her sons Boabdil and Yusuf, was made prisoner in the Alhambra. After her escape, however, she seems to have turned the tables on her unfaithful spouse, for she caused Boabdil to be proclaimed king in his stead.

But, though you may put a man in a big job, you cannot

make him big enough to keep it; and also, the Spaniards were quick, that is, quick for them, to seize upon the occasion of civil war, to take a hand in the game.

The upshot was that Aisha witnessed the surrender of the kingdom, with what bitterness may be imagined. Nor did her son's tears appear to have had a soothing influence.

"Weep!" she said, "Weep like a woman, for a kingdom thou couldst not defend like a man."

John who had conceived a great admiration for her, remarked that she was quite right to pitch into the fellow, for it must have been uncommonly provoking for a masterful woman like her to have reared a "bonehead"!

Standing in her little boudoir, one pictures her, beset, bewildered, but unbowed, looking out from her window upon the wide panorama of her country. As to the fate of poor Zoraya, the slave whose destiny it was to set a kingdom afire, I know not. *Sic transit gloria mundi!*

Reluctantly enough you will leave this scene of strange and moving drama, its arches, mosaics, the still water in lovely *patios*, the magnificence of line and colour. Turn your car to the Generalife. No, it is not a hostelry, as John asked hopefully, but was the summer house of these same Moors, and its perfect gardens will both gladden

your heart and cool you down. You have of course heard of them, for they are famous throughout Europe, but no hearsay can do them justice.

All this is no more than a fleeting glance at Granada, and not even that at the Cathedral, and the Capilla Real, where lie Ferdinand and Isabella, to whom Boabdil surrendered. But when you see it for yourself, you will understand the inadequacy of words to describe these giants of antiquity. As well imitate the sun with a candle. Yet if it throw light enough to guide you there, it is enough.

We drove into Cordoba in the afternoon of a hot day. The roads had not been perfect, and the hotel—a pot-shot of John's—was very imperfect. This would not have mattered had there been no better; but there was. It was just a case of poor judgment. Perhaps these facts combined to make us regard Cordoba at first sight with a certain amount of disappointment. We knew, of course, that the city was, in John's words, a "has-been," and that its decline so long ago as the eleventh century had been the signal for Granada's rise to supremacy. But perhaps we held more in mind its sometime greatness, its wealth, power, and culture under the Moorish rule, which dates from the eighth century. Cordoba had been a veritable Mecca of students, and disseminated Greek literature to all Europe and England.

A shadow certainly we expected of a city whose birthday was before Christ; but it seemed that we had found a corpse, decayed beyond all recognition.

But we were wrong. Cordoba is enormously interesting, even if there were not the Mosque.

The Mosque! It is inconceivable that one should go to Spain and omit it. Designed originally to out-Mecca Mecca, it is indeed lovely. The first impression, one enters its vast, dim solemnity, and pauses amid a veritable forest of pillars and arches of varying colour and material, is beyond description. No picture can do it justice, for to draw only a section seems unfair. It should be seen in its tremendous entirety. Moreover, although it is now a place of Christian worship, its atmosphere is of those old days of pilgrimage. Who can reproduce that?

It was begun in the year 785 and added to by each succeeding Khalif until the tenth century. Nothing was spared for its adornment—ivory, gold, silver; and carved panels of



The Court of the Alberca, in the Alhambra, which Spain captured from the Moors in the 15th century.

woods, these being fastened, it is said, with nails of pure gold.

The beautiful arches formed originally about forty aisles, leading to the Mirab, or Holy of Holies. There remain now only 860 of the twelve hundred pillars. Some of course fell victim to neglect and decay, and some, alas, were destroyed by a Christian bishop; for when Christianity took this wonder-place from Islam, sixty odd of these columns were removed, that a choir and altar might be built.

These latter, fine enough in their way, strike a curiously disharmonious note, and what might have proved impressive in other surroundings, is entirely out-classed by the utter perfection in design and workmanship, of the old Mosque.

The Patio de los Naranjos—Court of Oranges—decorated with orange trees, palms, and fountains of extreme age, is delightful; while from the Bell Tower a beautiful view is obtained.

Friend John, however, regretted the absence of a lift, referring with some pride to Woolworth's Building . . . ! And on being reproved for a commercial vandal, reminded us of the commercialism which had extracted pesetas from him at the Alhambra, Granada.

We drove him over the cobble stones to see the Roman Bridge, and so on to Seville, where we found him a good hotel. He is never a vandal when perfectly comfortable!

On arrival a slight misunderstanding occurred. The day was hottish, and the run had been sufficiently long. I remarked in English on the advantages of a long drink.

"Agua caliente!" said John, not listening to me. He had observed a beautiful lady close by, and as usual designed to represent himself as a Spanish linguist. The only immediate result, however, was that an astonished waiter, understanding both remarks, brought us three glasses of steaming hot water!

There is a considerable amount of English spoken in the Seville hotels, and John's vocabulary was wasted.

Seville was a surprise. I wonder if most people's sub-conscious of it is as a romantic little town, with perpetual moonlight, in which beautiful señoritas are serenaded by caballeros with guitars. It was certainly friend John's. We explained that it was the close season for serenaders just then.

Seville is in fact a busy, prosperous, and animated city, withal

charming to look upon, with its many trees and flowers. It has casinos, good shops, amusing cafés, and a distinctly interesting local life. The Sierpes, a narrow street with no vehicular traffic, is particularly intriguing, a very popular shopping centre, and thronged with wayfarers. Here may be encountered a real, live torero, in all his glad array. You may sit in a café and stare, or parade the Sierpes and be stared at.

John, who is extremely tall and ridiculously fair, simply "rang out" here, and had no need to repeat his Spanish formula to attract the attention of the dark-eyed fair. The difficulty being, in fact, to keep him *out* of hot water. With which object in view we snatched him back to the car, and went to the cathedral!

This is enormous, and very fine; perhaps a trifle sudden as a transition from the Mosque of Cordoba, but not to be denied as very gorgeous. I remember particularly how, as we reached the great gold screen, a shaft of sunlight fell full upon the golden Madonna in the centre, making the whole picture a shining glory.

There are many celebrated works of art in the chapels, and in the Capilla Real—Royal Chapel—lie San Fernando, and Peter the Cruel, with Maria de Padilla.

There is also the Christopher Columbus Monument, which naturally interested John. He attributes his flair for

Spanish in some mysterious way to this historic explorer.

The cathedral was built in the fifteenth century on the site of the Mosque of one Sultan Yakub. Of this nothing remains but the Giralda—which tower is easily climbed by a series of inclined planes, and affords a tremendous view—and the *Patio de los Naranjos*. In this court is the Biblioteca Colombino, which contains the manuscripts of Columbus.

The Charity is another notable treasure house, founded by a repentant roué in the seventeenth century, as a result, apparently, of an excessively bad dream in which he figured as the corpse.

There are here six famous Murillos, as well as some terrifying pictures by Leal, a Cordoban artist. Such nightmares were they that we departed in some haste, taking warning by the effect of dreams on the donor of the Charity!

We resumed our equilibrium in the Alcázar, a sort of younger Alhambra, which, since the fourteenth century, has been a royal abode, and still is. It has beautiful courts and fountains, orange groves, and gorgeous gardens, laid out by Peter the Cruel to please Maria de Padilla, a lady whom John describes as Pedro's "stepney."

We inspected the chilly subterranean bath which Pedro had had made for her. It is said to have pleased his whim to have his courtiers drink the water—not all of it, I hope, as the bath is of considerable length—after Maria's ablutions were completed.

From Seville to Toledo is a goodish run, but this ancient town, once the capital of Spain and still its religious headquarters, is a pleasure and duty in one, to the traveller who loves his car's bonnet to nose into mediæval days.

We took it, moreover, en route to Madrid.

The cathedral, thirteenth century, is Toledo's crowning glory, and well deserves the noun. It contains, too, priceless artistic treasures.

And you will be shown the house where Cervantes wrote; nor should you miss the fascinating Casa del Greco. . . . In brief, Toledo is antiquity, romance, history—Yesterday embodied.

We are going on now to Madrid. Why not follow in our wheel-tracks? You will find them I warrant, for nobody every removes anything in the land of Mañana. That is why—*gracias a Dios!*—it is also the land of Yesterday.



The Roman Gateway at lovely Ronda, through which is seen a picturesque vista of this most romantic town.

ON THE TRACK OF TROUBLE

YOU are descending a steep hill with second gear engaged and the engine switched on, when there comes a terrific bang, and you realise that the silencer has burst.

The preliminary bang is followed by others, intermittently. These, obviously, must be attributed to causes other than the injured silencer.

Naturally, your first job is to effect repairs in the silencer. An old oil drum, together with some copper wire, will serve for temporary purposes. Of course it will not be a perfect job, but should serve to keep you on the right side of the law.

You now try to start up the engine



Unless the plug points are set to the correct gap, faulty engine performance is bound to result. The proper gap will just allow an ordinary visiting card to be slipped between the points.

to test your workmanship, only to find that the utmost you can obtain from it is an occasional explosion. A moment's reasoning will assure you that a burst silencer is not likely to affect the running of the engine, and that you must seek the new trouble in the engine itself.

Proceeding by a process of eliminating tests, your first action is to remove all the plugs, reset the points, and clean them. If you find that they spark correctly, and yet the engine still refuses to start, you will naturally turn your attention to the carburetter.

You take it to pieces, clean everything thoroughly, test the petrol and replace the carburetter, only to find that the engine still remains obdurate. Puzzled, but determined to get to the bottom of the matter without professional help, you test the valve operation.



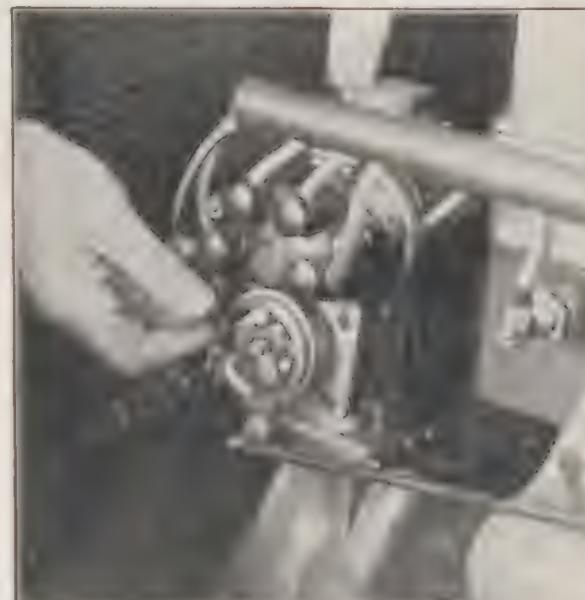
An obstruction in the carburettor jet will surely be removed by using the wire on a petrol can seal as a ram.

Everything is sound, save for minor tappet adjustment.

This last set-back leaves but one likely explanation. There must be a partial failure of the installation of the coil, with the result that the plugs are permitted to spark perfectly in the open air, but are prevented from doing so whilst under compression in the engine.

This will necessitate a journey to the nearest garage for a new coil. Indeed, you will be lucky if you don't have to visit several before obtaining it. However, still further trouble awaits you. The fitting of the new coil has no effect on the engine: the trouble still remains unlocated.

In despair, you put aside the likely and seek the cause in the improbable. Can the timing have gone wrong?



Make also a periodical inspection of the platinum points of the magneto. Remove any oil thereon, and set to the proper gap.

You set out to check the ignition timing, and find to your joy that the engine starts off merrily.

Alas! Your self-congratulations are premature. To guard against a repetition of the trouble, you readjust the timing chain—everything now seems correct, but whilst you are wondering what to do about the vertical shaft the engine stops yet again!

However, this time the trouble is quickly located. The distributor has ceased to function. The small lubricator for the spindle has been forgotten. The bearing has got hot, has partly seized, and twisted the spindle; consequently, number one cylinder fires at the time when number five should be firing.

Now at long last you have discovered

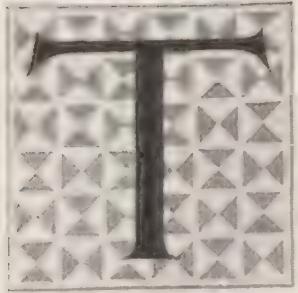
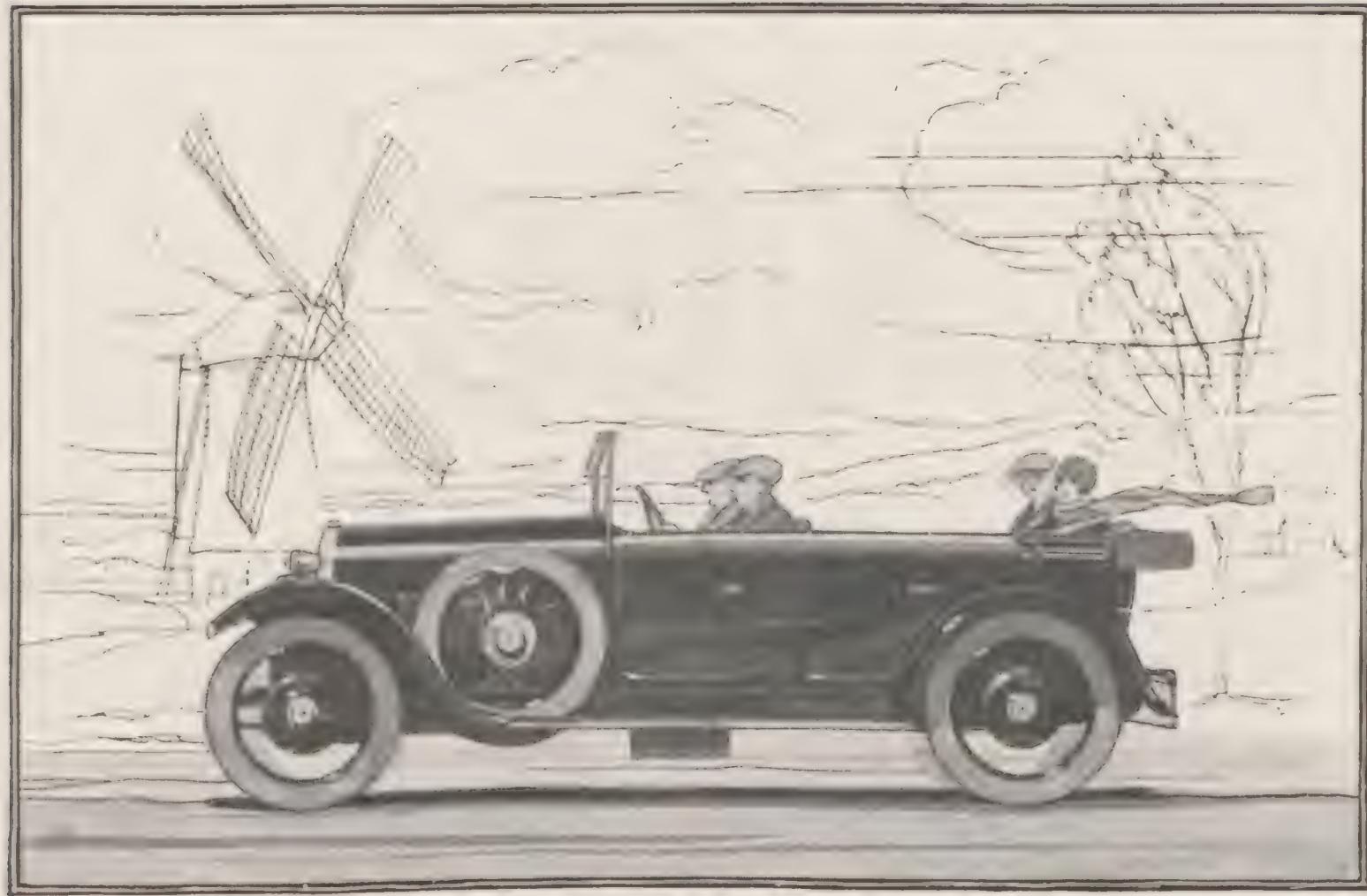


To obtain unfailing performance, the magneto should receive a few drops of oil at the oiling point every 1,000 miles. Yet how many owner-drivers trouble themselves to this extent?

the source of all the trouble; another visit to the garage, a new distributor fitted, and all is well.

Now, it may be thought that the sequence of events selected for this article has been merely adopted for the purposes of writing. As a matter of fact, they actually occurred in "real life," and, moreover, just in the order named.

When the affair was brought to our notice, it struck us that it came within the range of possibilities that the experience of the motorist in question might come to some reader of these columns—in which event, forewarning might lead to forearming. For we have noted that the misadventure was caused by neglect. It would never have happened if the little lubricators on the magneto or coil ignition had been given a few drops of oil after every 1,000 miles had been covered.



HOUGH [the Motor Show has closed its doors, the outstanding impression of the wonderful Sunbeam models remains.

The 14/40 h.p. with its attractive prices; the 20/60 h.p. which has enhanced its already firmly established reputation; the Three-litre Super Sports with its amazing speed and inviting appearance, and the new 30/90 h.p. eight-cylinder, the latest product of the famous Sunbeam works. Smooth, silent and ample power; commodious and luxuriously comfortable coachwork are combined at a price positively remarkable for a car of this supreme quality.

In the wide range of models there is a Sunbeam to suit every requirement. Don't rest content until you own a Sunbeam.

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MODELS AND PRICES:

14/40 h.p. Four-Cylinder Chassis, £495; Touring Car, £625; 20/60 h.p. Six-Cylinder Chassis, £795; Touring Car, £950; Three-Litre Six-Cylinder Chassis, £950; Four-Seater Car, £1,125; 30/90 h.p. Eight-Cylinder Chassis, (short wheel base), £1,050; long wheel base chassis, £1,250; with Limousine or Landaulette bodies, £1,850.

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COMPULSORY INSURANCE

It is always very unpleasant to be "compelled" to do anything. We should hate, for example, to think that motorists were "compelled" to fit K.L.G.'s. As a matter of fact no such pressure is necessary, for it has been so abundantly proved that a set of K.L.G.'s is a cheap, voluntary, effective, and lasting insurance against plug troubles. No plug that ever was made will cure a fault in a magneto, a bad sample of petrol, or a sticking valve. But K.L.G.'s will definitely ensure that if the spark is there the most will be made of it. That is why K.L.G.'s figure so prominently in all motoring competitions. They are invariably used by those who want to eliminate every possible risk. They are an insurance policy in themselves.

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FRONT WHEEL BRAKING

By WILFRED GORDON ASTON

Who explains the technicalities of this now popular practice in such simple language, illustrated by clear diagrams, that the absolute novice cannot but comprehend them thoroughly

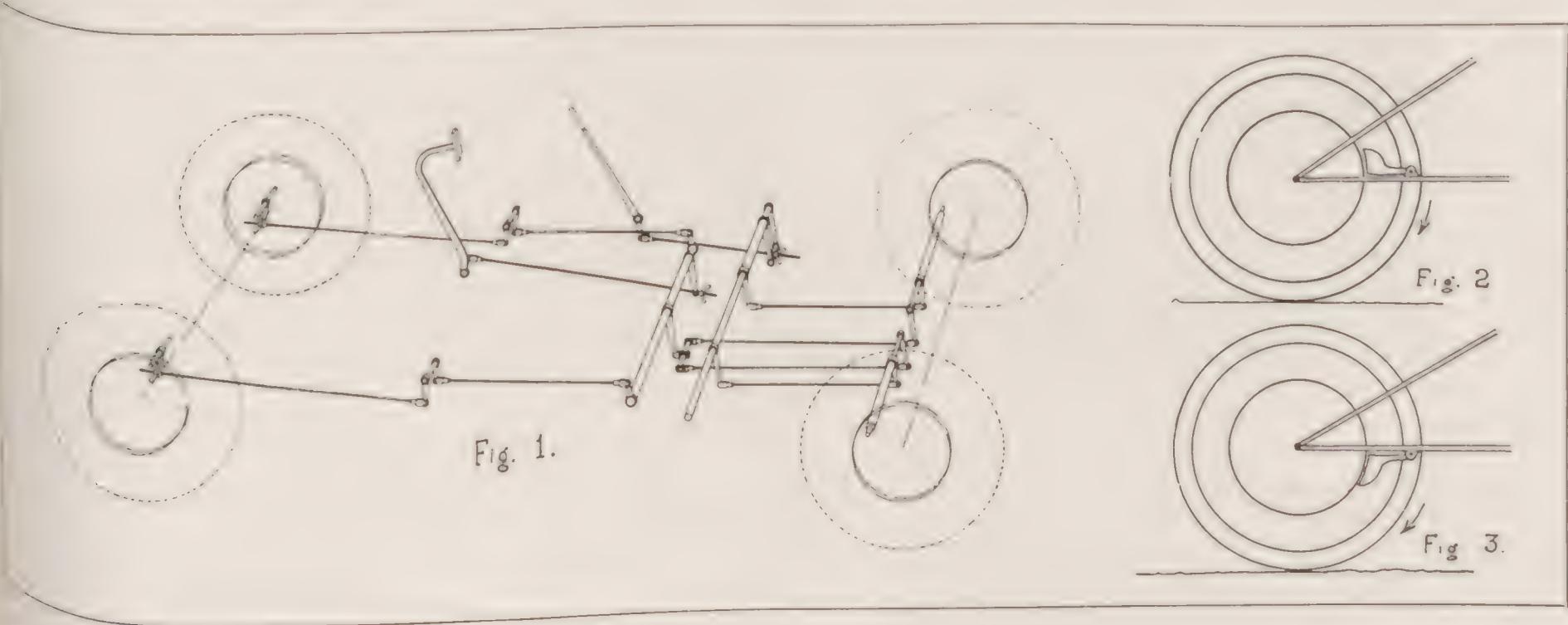
To anyone who has closely followed the development of four-wheel braking the Motor Show at Olympia this year must have been of absorbing interest, for the system in question, in respect to its adoption on the vast majority of cars, was undoubtedly its most outstanding technical feature. One was rather tickled to remember, in taking a tour of inspection, that only a year ago certain notabilities in the British motor trade were writing in a very forceful manner to prove that front-wheel braking was quite unnecessary for anything except racing cars; yet here they were in person proudly explaining the details of the four-wheel braking arrangement that they were now proudly exploiting. There is an old proverb which shows the folly of seeking to teach one's grandmother to suck eggs, but this is a case, one thinks, where the motoring public was the best judge of what it wanted and what was good for it.

Whatever may take place in the future it is obvious that at the present time there are scarcely two individual designers who can agree together on the question of what is the best way in which front-wheel braking can be carried out. And that is a very good sign. In spite of the enormous variety of braking principle which Olympia offered, there are still any number of other ideas which are well worthy of trial, and it may be that in course of time something will be developed, and will become

"standard practice," which is quite different from anything that we know to-day. It is variety in means of application that always ensures rapid progress. Motorists of the present generation—seven-tenths of them knowing little of mechanism *qua* mechanism, and rightly caring even less about it—will be intolerant of any four-wheel braking scheme that is not close upon one hundred per cent. effective, and it will thus be only a matter of a few months before any bad systems—if there are any—are exposed and the goats are separated from the sheep. In the meanwhile it would be absurd to suggest that four-wheel braking is already at the stage at which it can be said to be above criticism. The odds are that trouble of one sort or another will occur where arrangements have been hastily made for its incorporation. In a previous article I pointed out some of the very serious fences which have to be jumped if braking is to be smooth, dependable and quick in all circumstances, and this is a subject about which so much is to be said that I hope to have an opportunity of returning to it. No doubt, every four-wheel brake scheme seen at Olympia will work admirably when roads are dry, when a skilled driver is behind the wheel, when tyre treads are sharply defined, when the whole thing has been kept in proper adjustment, and when drums and shoes are in proper condition. But if all these circumstances are

adverse, a slippery road, a fool in charge, smooth tyres, slack in the rods and levers, drums variously dry and oil—will everything work properly then? That is the question that has to be asked, and I am regretfully bound to confess that there is only one answer that can be returned to it. We shall have to wait and see.

Generally speaking, the simplest arrangement of four-wheel braking—used, by the way, on a number of cars from the cheapest to the most expensive—is that in which all the brakes, directly acting on the wheel drums, are simultaneously operated by the pedal, as indicated in Fig. 1. Sometimes the movement of the cams is effected by rods, sometimes by flexible steel cables; sometimes the brakes themselves are of the internal expanding pattern, in other cases they consist of contracting bands; but in all cases where this simple and basic system is installed the principle is the same. Since the effects of wear and tear upon the brake shoes and upon other parts of the mechanism must be taken care of, it is usual—though perhaps not strictly necessary—to introduce a means of balancing or compensating the brakes, both individually and collectively, by means of whiffle-trees. [These are dispensed with when cables and pulleys are used.] It will be seen from the diagram that in consequence of this compensating gear each front brake receives an equal pull, as does each rear brake, and further



that the front pair receive the same pull as the rear pair.

In some instances the scheme is so designed that a greater pull is given to the front pair of brakes, owing to the fact that the front wheels have the greater capacity for retarding influence, but it here needs only to be pointed out that to compensate pull is not necessarily to balance braking effort. A given pressure on an oily shoe is not the equivalent of the same pressure upon a dry shoe. Again, road adhesion of the tyres concerned is a variable quantity. Some day it may be possible to balance the actual braking effect of each individual wheel, so that all do an equal share of the work. At present that practically ideal state of affairs has not been achieved. Balance gears do not work perfectly, but they are at least a step in the right direction, and, at the least, it can be justly claimed for them that they are very rarely a source of trouble.

The first departure from the standard and simplest form of brake lay-out is found when the semi-servo system is introduced into the front brakes. In this the shoes themselves, as will be seen later, act in such a way that when they begin to grip the drum their grip is automatically increased. By this means the effort on the part of the driver is reduced for a pull up in a given distance. Many makers favour this principle, but by no means all.

It is often asked, "Why is this cumulative braking idea applied only to front wheels? Could it not equally well have been developed for ordinary back-wheel braking?" The answer is that it could not. When back-wheel brakes are applied the fact that the centre of gravity of the car is a considerable height above the point of contact between the tyres and the road—at which the retarding force is applied—means that the greater the retardation the less is the adhesion of the wheel. Hence a semi-servo back-wheel brake would almost instantly cause the wheels to skid. In the front, the greater the retardation of the car the greater is the road adhesion of the wheel. Consequently, it is feasible in this case to multiply the braking effect to almost any extent without introducing the risk of slipping.

For the benefit of the (manifestly) thousands of people who talk glibly about semi-servo (or, as I should prefer to call them, "additive") brakes, without in the least knowing how they work, I will endeavour to explain the

matter in simple terms. In Fig. 2 we have the diagram of the back wheel of a motorcycle, with a "belt-rim" and a brake taking effect upon it, the brake shoe being hinged to the chain stay. If this shoe is above the stay and arranged in the manner shown, then, when it is applied, the friction between the shoe and the rim will be additive—that is to say, the shoe will tend to tighten itself and ultimately to jamb the wheel solid. If, on the other hand, as suggested in Fig. 3, the shoe is below the chain stay, the tendency will be for the rim to disengage it and to reduce the braking effect. Between these two points there is a mean position in which the shoe tends neither to release itself nor to apply itself with greater force (this is found in the ordinary symmetrical arrangement of internal expanding shoes). Also there is another point at which the shoe will *slightly* tend to increase its own friction. Of this point advantage is taken, either directly or indirectly, in the semi-servo, or self-wrapping, brake gear.

Fig. 4 shows the principle of a thoroughly representative semi-servo gear, known as the Perrot-Bendix, and fitted to the latest Bean cars. The primary shoe, which is floating, is anchored to the secondary shoe at A. The secondary shoe is anchored to the backing plate at B, and the auxiliary shoe is attached to the backing plate at C. Supposing the car to be going forward, the rotation of the wheel being as indicated by the arrow, the friction

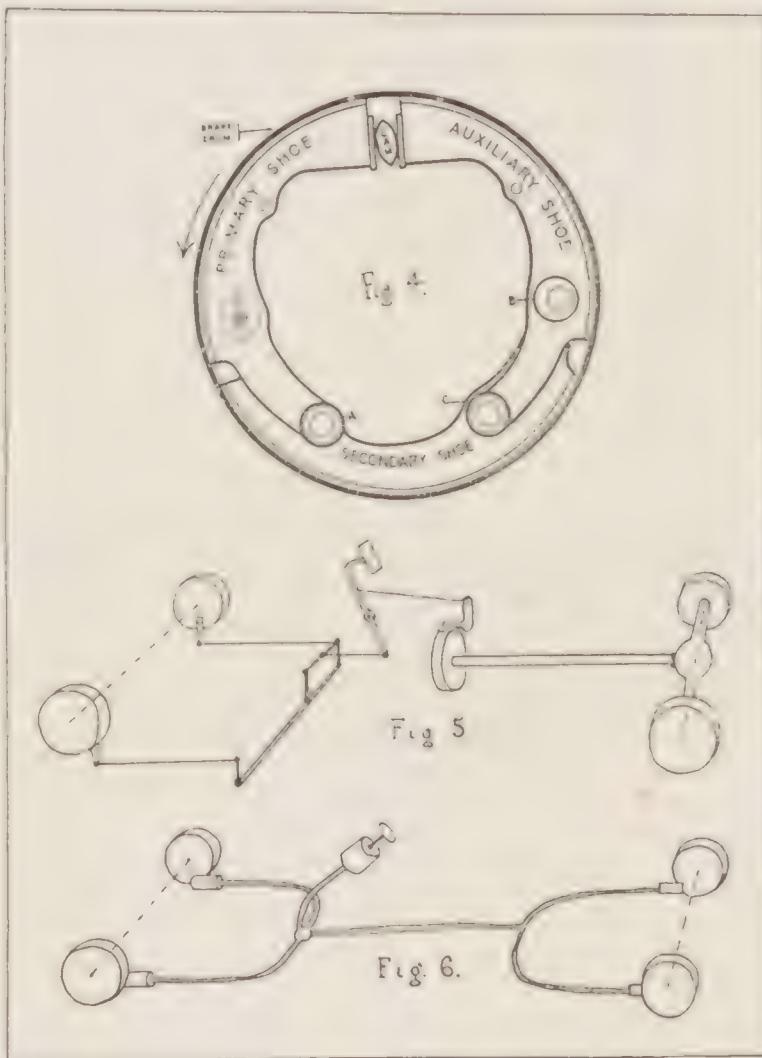
caused, by expanding the cam, between the primary shoe and the drum tends to carry this shoe round with the drum. Meanwhile the auxiliary shoe is being moved in the opposite direction, so that between the two the secondary shoe is forced outwards into harder and harder contact with the drum.

Whereas, as is apparent from Figs. 2 and 3, the single brake shoe, which has a self-energising effect when the wheel is going in one direction, has none at all when the direction is reversed, in the more complete arrangement of Fig. 4 this objection is overcome, for the auxiliary shoe acts in a slightly servo capacity of its own account, and thus gives all the braking that could normally be required. There are, of course, several other methods by which a similar end is sought, but at the moment we need not concern ourselves with them.

The first primary variation from the standard system of four-wheel braking, as already outlined, is to be found in the disposition of the brakes themselves. Since the rear wheels are both connected with the propeller shaft, and since the differential provides the required means of compensation, it is clear that a complete four-wheel braking system can, as suggested diagrammatically in Fig. 5, be effected by interconnecting the front-wheel brakes with a transmission brake, thus bringing about a simplification of the necessary connections. This scheme is used in several French cars and

also, notably, in the British Vauxhall. In some of the former there are actually no rear-wheel hub drums at all, as the hand lever controls a second transmission brake—only used for keeping the car stationary and in emergencies. In the Vauxhall hand control applies brakes on the rear-wheel hub drums, a practice that is used by many designers, even when the same drums enclose the shoes of the four-wheel system; but there are other arrangements in vogue in which all the wheel drums are devoted to the four-wheel scheme and in which a single transmission brake is applied, though not in a "service" capacity, by hand.

After having seen all the controversy which once raged about the question of whether the transmission brake was better than the direct-acting, and *vice versa*, one is rather driven to the conclusion that when front-wheel brakes are fitted it does not matter very much how the braking effort is applied to the back wheel. This, I think, is borne out by the



(Continued on page 22)



"Can you afford to Walk?"

THE MOTOR OWNER IN NEW YORK

By LEONARD HENSLOWE

If you are ever inclined to grumble at motoring conditions in London, just remember what motoring means in New York

YOU have been told that motor cars are cheap in America and that petrol is about 10d. a gallon, and this makes you think that America is the motorist's Eldorado. There are, however, other things besides cheap fuel and cheap cars; these things, in fact, bring their troubles in their wake, for cheapness means quantity, and motoring in America has long since lost the dignity that the possessor of a car still enjoys in England.

To own a car in America is no more remarkable than to own a bicycle in England—there are 18,500,000 cars in the States. When going motoring from any of the big centres, it is necessary to form up in a queue just as some people do when they go to a theatre. You have sometimes complained, no doubt—who has not?—of the procession of cars on the Brighton Road coming back from that gay suburb on a fine Sunday evening, but this is a mere nothing in comparison to the congestion you would find in New York, for instance. There you must be one of a long procession travelling at perhaps twelve miles an hour for mile after mile, getting covered with dust and scenting the nauseous smell of burning oil, till you are weary of seeing your neighbour's back number plate.

Black Beetles.

American cars are mostly painted black, and looking down from a fortieth storey window on to the motoring crowd below in New York, one is reminded of a lot of black beetles creeping along in close formation. The American cares nothing for the appearance of his car, except that it shall look powerful—more powerful than that of his next door neighbour. He is not keen about perfect motor machinery; that is why American cars, under the bonnet, are so roughly finished.

One a Year.

The English motorist rather prides himself on a perfect piece of finished machinery. A car in America is expected to be replaced in a year or two years by a progressive user—that is, a successful business man.

Out of New York there are a few roads running north-east, but anywhere else it is necessary to take the

APPRECIATED APPRECIATION

THE MOTOR OWNER has been honoured with expressions of appreciation from H.M. The King; H.R.H. The Prince of Wales; H.M. Queen Alexandra; and H.R.H. Princess Mary, Viscountess Lascelles.

Some further expressions of appreciation from readers are appended.

From the Marquess of Ailesbury.

"It is a very well-got-up journal and most useful."

From the Earl of Cardigan.

"I consider 'The Motor Owner' quite at the head of its class. You have the happy knack of making your articles instructive, and also most readable and interesting."

From Lord Garvagh.

"It is a very artistic production and must appeal to all motorists of discriminating taste."

From S. F. Edge, Esq.

"I have carefully read through 'The Motor Owner'—a very nice production indeed, and I congratulate you."

From P. Charnaud, Esq.

"To interest, instruct and amuse the average owner of a car—as different from the motoring 'fan'—'The Motor Owner' is unquestionably the finest publication extant."

"The South African Motorist."

"'The Motor Owner' is a fascinating monthly publication, with text richly and aptly illustrated. The make-up has been improved, and the illustration of the issue is even better than previously—which is saying a good deal."

From the Hon. Librarian—Club.

"Most of our members are motor owners, and undoubtedly yours is the best publication of its kind."

From M. A.

"It is a very admirable production. The make-up is good; the printing is good, and the matter is good."

ferry, one of numberless ferries—the lowest bridge on the Hudson is at Albany, 150 miles up—and for these it is necessary to wait in an endless queue. So that it may be fairly said that a preliminary to most motoring out of New York is a tiresome wait followed by a ferry crossing.

The next thing you are impressed with in New York is the American equivalent to "Verboten." Every yard there are Government directions: you must not do this; you must do that; tramways must only be passed on the near side; tramways must not be passed when stationary. As trams stop every hundred yards or so, you can imagine the stream of motor traffic that quickly gathers in the wake of a tram, waiting patiently to pass.

In some streets cars may be parked in others they may not, in others again they may be parked for ten minutes only, and in some for a gracious half-hour.

In some streets traffic is only allowed in a westerly direction, in others only in an easterly. Trespass in a westerly direction street, and the strong arm of the law is upon your shoulder.

Those Little Arrows.

Fines are full and frequent in New York. Hardly anybody really knows all the streets where these by-laws are in force, and so must one for ever be searching for the little arrows which indicate the direction. In New York to leave your car standing next to or before a fire-hydrant is a disastrous offence, and you get pretty nearly choko for it. In fact, any day you set out motoring in New York you may lose your cash, your licence or your liberty.

Winging Him.

Motor-cycle police parade the streets of New York to catch the motoring law-breaker, with revolvers and wireless outfits amongst their impedimenta. I understand that to fire a hole into a motorist's back tyre is a very effective way of stopping him. Although the American motorist has many cars to choose from at less than \$1,000, fuel at a fraction of London prices, and taxation within reason, yet I would sooner be a motorist in England any day.



WHO WOULD MOTOR IN NEW YORK?

THIS view of the city of New York illustrates how a city of thirty, forty and fifty storey buildings becomes so concentrated that the streets fill to overflowing. After a moment's reflection, it is obvious that the higher the buildings that flank a street, the denser the volume of traffic they produce. New York City being surrounded with water, its growth must be upward, and its traffic therefore becomes unmanageable. London, by being able to spread naturally north, south, east and west, should never have streets filled beyond their manageable capacity.



SUPERCHARGING AT LOW SPEEDS

In the past Mercéaès has set the fashion—indeed, many points of design which are still regarded as the latest practice, were found on the Mercéaès 20 years or so ago

THE outstanding feature of the modern Mercéaès is that it is the only touring car in the world in the standard design of which is included a supercharger. Discussion as to the merits of this piece of apparatus has raged for a year or more, but the general conclusion come to has been that, whether or not it is of service for racing purposes, it is worse than valueless for touring cars.

Now the Mercéaès shows this conclusion to be entirely erroneous—so far at least as the particular system of supercharging adopted on this car is concerned. The



Here we depict the luxuriously equipped instrument board, the neat and conveniently placed controls, and the strong and adjustable wind-screen.

natively with a change of gear for securing quick acceleration. As a matter of fact, the full depression of the accelerator pedal to bring the blower into play is so much simpler than the use of the gearbox, that the car may be looked upon as an almost entirely top-gear vehicle.

A second general misconception is that a supercharged car needs much more sympathetic and skilful driving; but with the Mercéaès at least the little necessary knack is picked up by any reasonably good driver in the course of a quarter of an hour or less, and thereafter the car is simpler to drive rather than otherwise, by reason of the elimination of the necessity ever to change gear.



A very excellent feature of the Mercéaès is the clever combination lock mounted at the head of the gear lever. This effectively locks the gear lever and prevents unauthorised use thereof.

first misconception upon which the car throws new light is that supercharging is of use only at very high engine speeds. While it must be admitted that even with the Mercéaès the effect of using the forced induction system is more marked the higher the engine speed, the supercharger may be set in action with benefit at so low a road speed as ten miles an hour on top gear.

Its effect is, roughly, to increase the engine's power output by something approaching 50 per cent., with the obvious result that in traffic driving the supercharger may be used alter-



A luggage carrier of unusual design and strength is fitted; and, as can be seen above, it may be adjusted to suit many kinds and sizes of luggage. A dust cap covers the petrol gauge fitted on the tank.

The Mercéaès car which we tested was the 24/100 h.p. model (23.8 R.A.C. rating). It has a six-cylinder engine, and is a large car in every sense of the word. As an "engineering" job one might write pages in its praise, and from the point of view of real performance space is also painfully inadequate.

When used as an ordinary car, it is smooth and powerful, and runs just as one would expect a car of its type to run. It is light to handle and very responsive to its controls, with a maximum speed sufficiently high but by no means startling. But on bringing



Other good features of the Mercéaès are the Bosch horn and head lamp arrangement, and the powerful front-wheel brakes

the supercharger into play its whole behaviour is changed; from being just a reasonably good car so far as acceleration is concerned, it becomes a super-racer, with a maximum speed near to 100 miles an hour.

The safety of the car at very high speed is largely due to its rock steadiness and the absolute certainty of the steering, combined, of course, with excellent four-wheel braking. There cannot be a car which holds the road better, and even in the course of a long, fast run over wet roads, we felt not the slightest tendency towards skidding. Brockley Hill, our standard test, was surmounted at no less a speed than 64 miles an hour on top gear.



Two cars in one ; a straightforward, docile yet lively, high grade touring car which, at the mere depression of a pedal, may be transformed into an entirely different vehicle, capable of really fierce acceleration and a maximum speed well up towards the 100 m.p.h. mark—that is what the Mercédès super-charger gives one. The powerful four-wheel brakes, on the other hand, provide absolute safety at all speeds.

SOME WIRELESS PITFALLS

By ROBERT W. BEARE

There are numerous pitfalls for the amateur wireless enthusiast, and often when and where least expected. False economy, for instance, is a frequent one, and very often has disastrous results.

HAVING learnt from bitter—and expensive—experience, I am never tired of impressing upon the amateur radio constructor the danger of purchasing cheap component parts merely because they are cheap. A wireless set is so delicate and sensitive a piece of apparatus that any detail in its composition which is not as nearly as possible perfect may—and usually does—not only detract from the perfection of results, but may cause also mysterious and annoying failures. While some inexpensive components may be good, I have come to regard them all with suspicion, and in such matters as variable condensers and filament rheostats, fixed condensers and resistances and coil and valve holders, I do most earnestly urge the beginner never to purchase an article which bears no maker's name.

Unfortunately, to follow this advice often makes a projected set perhaps doubly expensive, and so, maybe, of prohibitive cost. But as a matter of experience, a set made up with components of the cheapest is too often a sheer waste of money, not to say a perpetual thorn in the flesh, on account of its erratic behaviour. The alternative, of course, is to make a smaller set of good parts which will come in cost within the amount of cash available; but there is another method by which cost may be materially cut down without sacrificing efficiency.

In the first place, it is by no means necessary to use a large and expensive ebonite panel, or to fit the set in an elaborate cabinet—especially where the intention of the receiver is even faintly experimental. Base-board mounting of most of the components is much more convenient in view of probable future circuit alterations—and, in fact, suitably housed, it is quite the latest fashion. In the fashionable set only the tuning and filament con-

trols are carried on the vertical panel; but it is not really necessary to use ebonite for the purpose. A nicely finished and french-polished panel of oak or mahogany serves the purpose equally well and is of better appearance. Where condensers require the highest possible degree of insulation it is a simple matter to bush the holes in the wood through which their spindles project; or all the controls may be mounted upon small panels of ebonite (the amateur's workshop usually contains plenty of "scrap" that can be used) and the woodwork cut away in symmetrical openings to accommodate them.

Base-board mounting components, such as valve and coil holders, are easily obtained, but it is also simple, with the aid of further scraps of waste ebonite, to improvise such articles out of the material at hand.

Much economy may be practised in this fashion; by eliminating the panel and cabinet, for instance, a couple of pounds more or less may be saved which is much better spent upon really reliable, up-to-date variable condensers.

There is another source of expense which the beginner usually does not realise until he is too badly bitten by the fascination of wireless to be able to draw back. He begins with the idea that valves cost 8s. each, and that Dutch valves at 3s. 1*½*d. will possibly serve. They do; and they will—in certain circumstances. But if the best possible results are desired in a set providing for high-frequency amplification, detection and low-frequency amplification, each of these functions really calls for the use of a specially designed valve.

The general purpose valves of most British manufacturers are very good indeed, but the results obtainable with them can only be average results. If you want the "best possible," you must use, for instance, a small power valve in the last socket; and you would do better to use special low-capacity valves on the high-frequency side. The power valve, by the way, will give as much volume as, and far better quality than, two stages using ordinary g.p. valves. Then, again, if the set is to be a multi-valve superheterodyne, the drain of six to nine general purpose valves

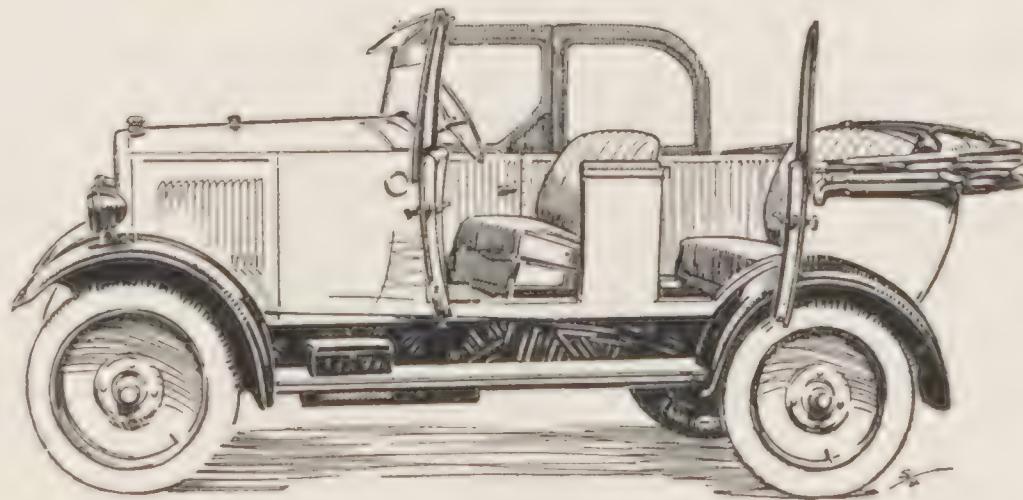
upon the accumulator is out of all reason; either a larger battery must be bought, or the valves must be dull emitters—the latter, of course, being more expensive.

Then, again, if it is desired to hear stations at the far corners of the earth, there is not the slightest use in purchasing cheap telephones of doubtful foreign origin; while if real music is desired from the loud speaker the finest instrument obtainable is necessary.

But there is no need to labour the point. Cheapness is a very questionable virtue in wireless; and it dispense with the implied guarantee of a maker's name is fatal. A cheaply made wireless accessory seldom gives long satisfaction.



The New 3-Door Four-Seater Trojan



AN alternative model for the motorist who desires to combine the economy and convenience of the Trojan Utility Car with conventional body design. Note the wide entrance to the comfortable, well-upholstered and roomy rear seats.

This new model, which made its first public appearance at the Motor Exhibition, Olympia, this year, incorporates the following new features :—

Exceptionally spacious rear seats and leg room.

A wide third door, which gives access on the near side to the rear seats.

A handy locker for side screens, etc., behind the rear seat squab.

Two removable side screens, giving, with the hood, perfect all-weather protection.

Interior specially upholstered; cushions and seat-backs framed up, incorporating substantial springs.

Large capacity tool box in rear of the vehicle.

This new model places the Trojan in the front rank of conventional four-seater British-built design. The price needs no comment.

£145

on pneumatic tyres, including speedometer.

On solids, £140.

Write for further particulars of this new model.

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THE Humber models for 1926 fully maintain the reputation of the Humber name for sound craftsmanship plus that grace of line and ease of control that make a car a pleasure to possess. Intending owners will find the Humber in all respects a car to be considered. It is a revelation of what all-round value can be put into a car of moderate price.



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12·25 h.p. 4-Door Saloon	£555
12·25 h.p. 3/4-Seater Coupé with Double Dickey Seat	£555
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15·40 h.p. 4-Door Saloon	£860
15·40 h.p. Saloon Landaulette	£860

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The factor governing the power of your car

A CAR is only able to develop the maximum horse power by the use of a fuel capable of exerting the necessary energy.

An engine rated at 12 h.p. is not confined by any mechanical limitations to this power but may be capable of developing 40 h.p. if the propellant force is adequate to develop the necessary engine revolutions. National Benzole Mixture develops

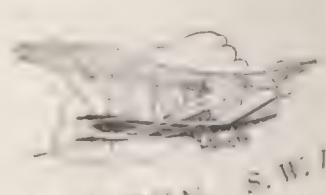
greater power than any known motor fuel and entirely eliminates 'pinking.' 'Pinking' is a defect which is a decided deterrent to engine speed. National Benzole Mixture substantially increases m.p.g. and the capacity for hill climbing. It produces silky running and ensures a clean engine. The fuel is the factor that governs the power of your car and the fuel that gives the greatest power is

National Benzole Mixture

"The world's best motor spirit"



NATIONAL BENZOLE CO. LTD., WELLINGTON HOUSE, BUCKINGHAM GATE, LONDON.



S.W.1

SOME PRACTICAL HINTS

In matters motoring—as in so many other phases of life—it is often the little things that matter. Big troubles have to be attended to. Here are ways and means of attending to many of the small ones yourself.

IT is at this time of the year, when road conditions are changing from autumn to those of early winter, that accidents caused by skidding become more prevalent. Indian summers having, seemingly, become the regular thing, we have got accustomed to driving on more or less dry roads. Now we find that there are wet, greasy, and, perchance, icy ones to be faced.

It behoves a motorist always to keep watchful eyes on changing road conditions. He is apt to forget that the entire brake efficiency of his car is fundamentally dependent on the grip his tyres obtain on the road. Even the best of brakes suffers a 50 per cent. decrease in efficiency when opposed to bad road conditions, and, moreover, it must be remembered that these adverse conditions may come into existence in the course of a few yards.

The moral to be drawn is obvious. Whenever you find yourself on a greasy surface you should immediately adjust your usual driving to suit the changed conditions.

Let us consider the more common causes of skidding. To obtain a practical grip of the subject it will be necessary first to ascertain why a car skids. We have already said, in regard to braking power, that you are dependent on the grip of the tyres on the road; and you will readily realise that if the rear wheels are (or one of them is) revolving at a speed which does not correspond to the actual speed of the car, the grip between the tyre and the



A very common skid (rear wheels), especially on a heavily cambered road. The counter move for this is to turn the front wheels into the skid, as depicted, when the car will straighten up.



Tramlines on a wet day are ever a source of skidding dangers—avoid them whenever possible

road must be momentarily less than under normal conditions. Therefore, if one of the rear wheels is (or both are) revolving faster or more slowly than the speed corresponding to the speed of the car, there is less grip of the road surface. To go a step further, it follows that if the grip for forward driving (or for stopping) is reduced by this wheel spin, the grip to arrest or thwart any tendency to swing sideways is also reduced.

If you accelerate, or brake suddenly, you set up forces in the chassis which tend to make the rear of the car swing sideways. If your sudden acceleration or braking is sufficiently severe also to make the rear wheels "spin" (or stop rotation, or even spin backwards), you have made side movement of the car easier at the same time that its side movement tendency is brought into being.

As you are aware, the greatest danger in skidding is sudden brake application. This introduces another element which still further reduces the grip of the rear wheels on the road. Putting on rear wheel brakes transfers to the front wheels a portion of the load pressing the rear wheels to the ground. These, then, are the varying forces which act on the back of the car when skidding conditions prevail.

You will also readily appreciate from these remarks that a heavily cambered road is another important factor which adds to the dangers.

We can now turn to the methods for



Very often leaves which appear to be dry are not so, for beneath the surface is lurking a wet and greasy patch ready to send your car a-skidding. Therefore, avoid leaves wherever possible. Although most cars, nowadays, are fitted with hand operated, and mechanical, screen wipers, a very useful hint for readers with a car not so equipped, is the use of a potato, the juice of which is very effective for retaining a clear surface.



preventing or correcting skids, and on this occasion we must confine our attention to rear-wheel skids. The front-wheel variety are most difficult to correct, but, fortunately, they are very infrequent when good tyres are provided.

The most common type of rear-wheel skid occurs when brakes are applied suddenly on a greasy road. If you are on the left of the road, and there is any camber to it, the rear of the car will tend to skid into the left of the road. The natural tendency of the uninitiated, on suddenly becoming aware of this danger from the left, is to steer away from it. But the contrary mode of procedure is the correct one to adopt. The steering wheel should be turned towards the left, and at the



When all foreign matter has been extracted from the tyres, then fill up the holes and cracks with a reliable tyre-filling fluid. There are quite a number of these on the market.

all to pay. The water slowly penetrates through all cuts and gradually ruins the inner casing.

Periodical examinations of the tread of the tyre are therefore most necessary, and when cuts are found they should at once be filled in with one of the many rubber plastics marketed for this purpose. This naturally applies more particularly to the deeper apertures.

All embedded stones, nails and other pestilent enemies to good service should be removed carefully. Please make a special note of the word "carefully," for unskilful handling may easily cause a puncture. It will often be found that a nail is embedded in the cover at an angle which would permit of the car being run for a considerable distance before it penetrated to the inner tube. But if in withdrawing the nail the point is deflected in a downward direction, you may easily bring about the trouble you are trying to avoid.

When extracting such a nail or flint, the direction of its original entry should be ascertained, and the with-



Little effort is really necessary to lengthen the life of the tyres. Give them an occasional inspection, and withdraw all flints, nails, and any other foreign adherents.

same time the brake pedal should be given a smart dab.

This will have the effect of bringing the back of the car up the road again, and at that moment the steering must be directed to the actual direction in which the car is required to go. It must be remembered that the steering movement for correcting the skid is only momentarily directional—so momentary, in fact, that if the movement be correctly done there will be hardly any directional result from the steering setting for skid correction.

On Tyre Preservation.

One of those minor matters connected with the general welfare of the car which often gets neglected is tyre preservation; and at this period of the year especial attention is demanded in that direction.

The principal factor which tends to shorten the life of a tyre is damp. All the "demolition moisture" of summer will do no harm, for the first spell of sunshine will speedily dry the tyre again, but when it is subjected to continual moisture there is the deuce and



If all road users were to maintain their right side of the road, especially on awkward corners, all possibilities of an accident would be reduced to a minimum.

drawal should follow the same course. Indiscriminate tugging at it with a pair of pliers is almost certain to bring disaster.

On Avoiding Blind Corners.

Amongst other bad habits which are characteristic of a certain section of motorists, the practice of halting where the road bends is one that calls for strong condemnation.

We honestly believe that the majority of drivers who err in this respect, do so from want of thought. The desire to do the wrong thing is far enough away from their thoughts.

But, unfortunately, the Imp Disaster recks not of intention; he only lurks about looking for opportunities. And when he finds a car standing on a



Don't stop on a corner if it is possible to avoid doing so. A following car may not be able to see you until it is too late!

sharp or sharpish bend in the road he gives an unholy chuckle, and prepares for maleficent action. His joy is more intense when the road is a narrow one.

In all likelihood he arranges that a car shall approach from either end of the bend and arrive simultaneously at the danger spot. If the drivers of both cars see the stationary one in time, and are able to exert the utmost efficiency of their brakes, nothing worse happens than perfectly justifiable bad language. If, on the contrary, through unforeseen circumstances, either of these elements of safety are not brought into play—well, then all three cars are involved in a bad accident, which possibly may lead to loss of life.

It cannot be too strongly stressed that wherever it is possible, a motorist should select a spot for coming to a standstill which will enable traffic approaching from all directions to get a clear view of his stationary car.

If he has a puncture, he should drive the few yards necessary for safety very slowly on low gear. No damage will result to either tube or cover if he goes carefully.

MOTORING IN THE RIVIERA



On the Borders of France and Italy.

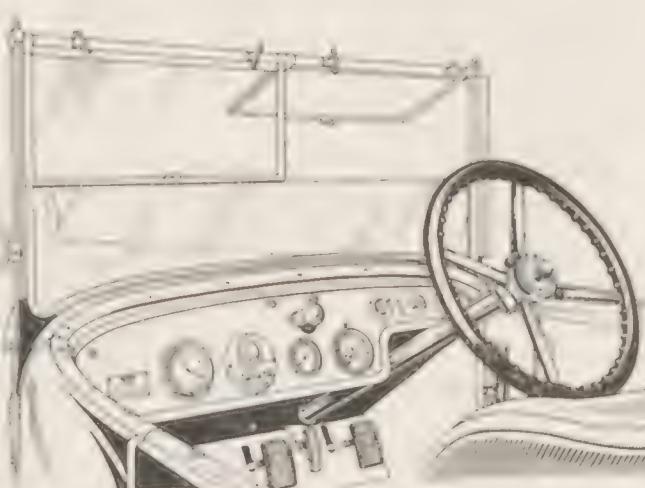
ACON
MOKE

THE 11·9 ALVIS—EFFICIENCY AND REFINEMENT

A car, the performance of which is truly remarkable. The outstanding good qualities are : pronounced comfort, ample power, and a large measure of safety

TO drive an Alvis car for the first time is to find instant realisation of the unmeaningness of the description "eleven-point-nine." Legally, that is the rating of the Alvis; but in performance and in general "feel" the car is in a different category altogether. It is not merely that the engine has an immensely greater power output than this 11.9 h.p.—rather is it in the unobtrusiveness with which that power is exerted that the principal charm of the car lies.

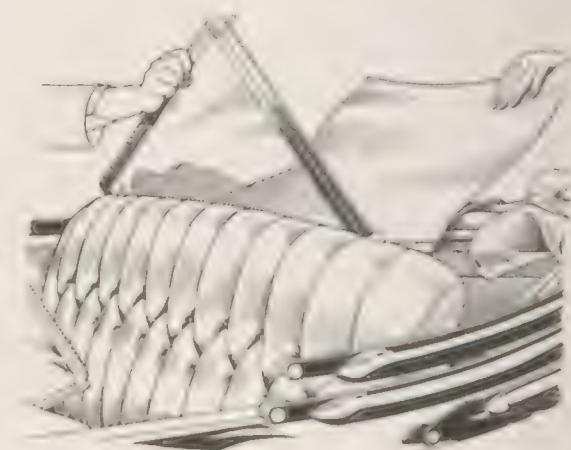
In a day of many apparently similar light cars of general excellence, the Alvis stands alone—one almost said supreme. At any rate, the newest



The windscreen is of the two-piece variety, each half being independently adjustable. Note the well-fitted instrument board and the conveniently placed controls.

While the Alvis is essentially a simple car to drive, it is nevertheless one which well repays understanding and sympathetic treatment. It is a remarkably good hill climber and top-gear car even when used in an ordinary moderately skilful fashion; but if the best use is made of the four-speed gear box, its acceleration and general powers are phenomenal.

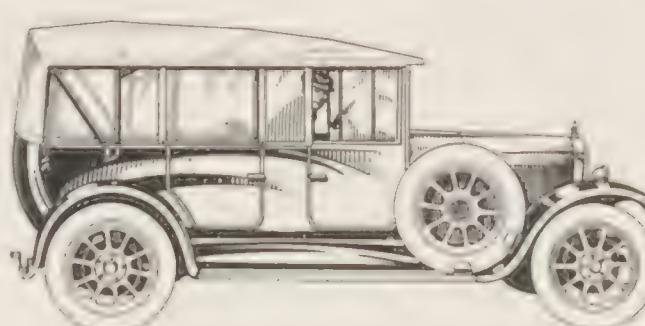
Except to say that the engine (69 mm. bore by 110 mm. stroke) is of the overhead valve type, there is no need to go into details in regard to the specification, since on paper this would appear merely conventional. Just where the secret of the Alvis's quite exceptional behaviour



Side curtains, when not in use, are carried behind the back squab of the rear seats, and each portion is slipped between sheets of protecting material.

miles an hour, so that the make under review is probably something like ten miles an hour faster in ordinary use.

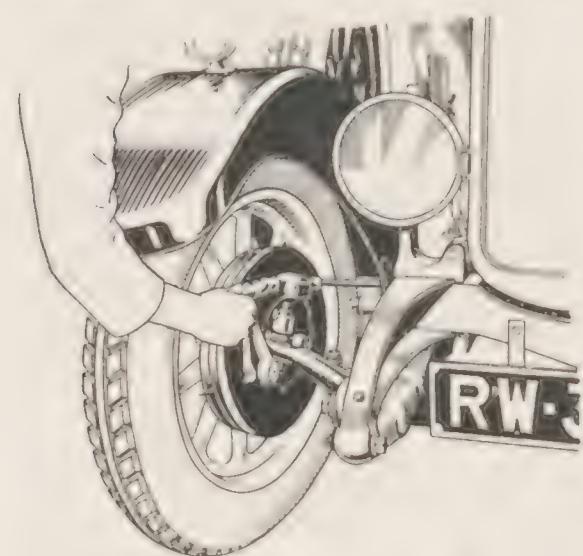
At this cruising speed of forty odd miles an hour the Alvis almost "drives itself." The steering is honestly finger-light, and yet sufficiently irreversible to prevent anything in the nature of wheel wobble from uneven roads—provided, of course, that if balloon tyres are used, they are correctly inflated. This lightness is characteristic of every detail of the control of the car; one of the main improvements as compared with last year's models is that the weight of the clutch spring has been materially reduced.



The neat lines of the touring body are even enhanced by the erection of the well-designed all-weather hood and side curtains. Note the sliding window by the driver's seat—this simplifies road signals.

lies it would be difficult to say; but doubtless it is in the great care which is expended upon every detail rather than in any one particular point.

The standard of refinement set by the chassis is lived up to by the carriage work, and the cosiness and even luxury of the standard touring body when used as a closed car with the all-weather equipment in position, is worthy of notice. Alvis prices range from £495 for the 4-5 seater touring car to £695 for a four-seater saloon. The vehicle is made by the Alvis Car and Engineering Co., Ltd., at Coventry, the London agents being Messrs. Hennlys, Ltd., of Great Portland Street, W.1.



There are brakes of an efficient design on all four wheels, and these can be easily adjusted—the necessary adjustment mechanism being readily accessible.

model has qualities which give it a marked individuality, and no one who has once become acquainted with the Alvis is likely to be completely satisfied with another make.

The maximum speed of this car is something in excess of sixty miles an hour; but this is of little importance compared with the ease with which a pace of forty to forty-five miles an hour is not only attained but held. Every car has what might be called a "cruising speed," at which it runs most satisfactorily in every way, and is easiest to drive. With the average light car of the nominal power of the Alvis, this speed usually varies between perhaps twenty-eight and thirty-five



To say that the 11·9 h.p. Alvis is a Rolls-Royce of light cars is trite—but true. The keynote of the car's performance is the extreme efficiency with equally extreme refinement.

MOTORING WITH EVE

By MARTIN H. POTTER

From Lydney to Chepstow, Usk, and Raglan

We peer into the Past, and
get a lesson in loyalty

Roads which follow the course of a river always have a particular fascination for Eve, inducing in her the spirit of song. As the one which runs from Lydney to Chepstow roughly keeps by the side of the Severn, and affords glimpses of it at various points, it was a warbling Eve who sat by my side in the car.

"For the river calls and the road calls, and oh! the call of a bird!" I quoted as we bowled along. But for some reason this caused ripples of ribald laughter to bubble from my fair companion. Apparently the germs of humour were hidden, all unknown to myself, in my little effort at sentiment.

When I requested enlightenment Eve only laughed the more, and all I could get from her was that I was "a dear old innocent" and a suggestion that I should express my bewilderment in this article, in the hope that some reader would "put me wise." So, in it goes!

We pursued the Chepstow road until we came to the hill which leads into that ancient town, then turned off to the right along the St. Briavel's Road, our object being Tidenham Chase, for at that delectable spot there is a view which would warrant a digression of treble the distance.

About two miles up the road we came to a church on the left, where we abandoned the car for the nonce to take to the fields, and finally to a path ending in a high rock overhanging the river Wye, some 500 feet below.

The stream, a silver thread in a pattern of green and brown and gold, weaves its way through the valley, and something under a mile away nestles Tintern Abbey on its bank. From this point we saw a view of this architectural gem unobtainable from any other position of which I know. Short of flying over it, from nowhere else can one gaze down

right into the old abbey to discover new beauties, or rather old ones from a new angle, through the space once covered by its now dismantled roof.

Then, turning towards the mouth of the river, our eyes were greeted by no less wonderful, although quite different, scenery. Here the river cuts its way through a deep, bare gorge, and beyond this is the gigantic 900 feet tree-clad precipice known as Wyndcliff.

We made our way back to the car, and turned its bonnet towards Chepstow once more. Just before we reached the spot where we had branched off, a glance to right and left showed the Wye on one side and the Severn on the other, for a little farther on the two rivers become one.

Here was matter indeed to make Eve warble, and she availed herself to the utmost. But, although she eyed me with rampant provocation, on this occasion I refrained from quotation.

Down the hill we bowled merrily, across the bridge whose first span is in England and whose last is in Wales, and so to the town which Harold, the last Saxon King, called Chepanstow, the place of traffic, and the Normans who followed him, Chepstow.

You are confronted with evidence of the handiwork of the latter race as you come to the foot of the hill, for on the farther bank of the Wye stand the remains of the fine old castle built by a son of that conquering race, one William Fitzosbern, Earl of Hereford, as recorded in Domesday Book, in which the castle is called Strigil.

If you are lucky, as we were on this occasion, you will come upon it at high tide. At such a time, the water lapping up to the precipitous rock on which its walls are reared, brings added picturesqueness; but, on the other hand, when those walls are fringed by black lava-like banks of mud, the building gains a subtle air of former impregnability.

However, whether the exterior be viewed at high or low water, it always gives promise of a beautiful interior. The promise was not belied when Eve and I passed under the fine circular arch, flanked by the two massive round towers, and found ourselves amongst the shells of its former greatness. They are but shells, it is true, but enough remains to indicate how wonderful the entire building must have been.

From the massive citadel to the magnificent building known as the chapel, and so on to the towers and walls which overhang the river, we wandered, marvelling at the strength with which their builders had endowed them—strength which (strange anomaly) decay had made more apparent, seeing that we could the better note the workmanship and thickness of material which went to make up their solidity.

Seated on the walls and gazing down at the river, Eve and I pictured the closing scenes of one of the many assaults which the castle had withstood.

It was during the Civil War, when Sir Nicholas Kemeysheld it for Charles with only 160 men against



The fine old Norman doorway of Chepstow Church. The building was at one time the Chapel of a Benedictine priory.

a beleaguered army led by the Protector in person. But so stout was the opposition put up by the tiny garrison that even the doughty Cromwell had to give up the job in disgust, delegating the further investment of the Castle to a subordinate. Then, where warfare had failed, starvation succeeded. Reduced to their last ration, the defenders would not surrender, but, recognising that they could do no more, made arrangements to escape by the river. All was prepared, but in the early hours of the night selected, a Parliamentarian swam the river and cut the cable which moored their vessel to the cliffs.

Then at last, worn out by famine and this final disappointment, the brave little garrison succumbed to an overwhelming assault, and with its gallant leader was slaughtered, fighting to the last.

With that Homeric struggle fresh in our minds, we left old time-battered Striguil to its memories.

Before continuing our journey, we visited the fine old Norman church which contains the tomb, amongst many others more worthy, of Sir Henry Marten, one of the regicides who signed the death warrant of the Martyr King. He was confined in Chepstow Castle for 20 years by Charles II. There is a most laudatory and lengthy poetical epitaph on the stone of Marten's grave. He is said to have composed this himself during his captivity. Eve, an ardent Royalist, thought he might have devoted his time to better work!

We left Chepstow by its fine old West Gate and pursued our way by Llangwm to Usk.

Now Usk, situated on the river of that name, is a pleasant, stolid old town which carries its ancient lineage with becoming dignity.

Like Chepstow, it has the remnants of a fine old castle with a history just as extensive and stirring. Stories of derring do cluster round its ivy-clad fragments. It stood many sieges and changed hands many times in that period when the Normans were fighting the turbulent Welsh, and by no means invariably getting the best of the argument. If its stones could speak, they would shout the names of Simon de Montfort and Owen Glendower and, coming down to later days, lament, again like Chepstow, the ruin which overtook them in the stormy period of Charles I.

However, the glory of both towns has departed, and nowa-days they live on their past, by

catering for the flock of tourists who come to share it with them.

Amongst the other good things which are included in their present-day menu, I must not forget the succulent salmon in which both take a justifiable pride. The fishermen of Usk catch them outside their front doors, so to speak; those of Chepstow have to make a journey up their beloved river for them. But, whether the salmon be Wye or Usk, I can certify, as one who has tested both, that they are equally delicious.

Fine as are the ruins of Chepstow Castle, they pale before those of Raglan, to which in due course the car carried us. True, the castle of Raglan cannot claim to be as old as that of Chepstow, for it came into existence no earlier than the fifteenth century, but even making allowances for the disparity in age, it must have been a far more beautiful pile, although, possibly, not so strong from the point of view of defence. Indeed, it served in the dual rôle of palace and fortress.

Sheltered by its massive outer walls and wide moat were gorgeous state-rooms and banqueting halls, as befitted the state of its successive owners. The first of these was the son of Sir William ap Thomas, afterwards Earl of Pembroke. Many years later it came into the possession of Sir Charles Somerset, Chief Chamberlain of

Henry VIII, who created him Earl of Worcester in 1514.

The family of Somerset held Raglan for several generations until its downfall, which came about in a similar manner, and by the same hands as Chepstow.

Eve and I came upon Raglan Castle when a moon in its second quarter was shedding an ethereal light upon the walls, softening the ravages of time; building anew with the shadows of what remains that which Fairfax had ruthlessly destroyed. Before our eyes the castle grew once more to something of its former noble proportions.

As we watched, the ground in front of us became peopled with an army of sullen soldiery, good fighting men enough, but sour as to visage, puritanical as to demeanour; close cropped as to hair, and sober as to dress.

They were waiting as victors to greet the vanquished, and yet their attitude savoured of defeat. Now and then they broke into a psalm, but the effort was half-hearted and died away before a burst of military music which came from the building they faced.

Then the massive gates between the machicolated towers were flung wide open, and a band of men marched out with colours flying. They were as gallant in defeat as in defence, those

gaily-clad Cavaliers with the flowing love-locks. They had stood a siege of ten weeks on short commons, and not until the last round of ammunition had been fired had they given up fighting for The Cause, which they knew was a lost one.

At their head marched an old man, an octogenarian. It was Henry, fifth Earl of Worcester, created a marquis four years before by the King, for whom he had sacrificed all. Treasure, land, health, and now even the home which had been his ancestors' for many generations had been cast cheerfully into the melting-pot of patriotism.

The devoted little band passed through the ranks of the victors with all the honours of war. As they passed out of sight, the despoilers set about their fell work, and the noble buildings were torn stone from stone until only the bare walls remained.

Mingled with the sound of falling masonry there came the faint cry of the Cavaliers in the distance—"God and the King."

Its echoes reverberate down the aisle of Time. The call is just as poignant, just as insistent, to-day.



The ruins of Raglan Castle. It was destroyed in 1646, after a gallant defence by the octogenarian Marquis of Worcester.

ON BUYING A CAR

By a BARRISTER-AT-LAW

At a time when the new Show models are uppermost in the minds of all motorists, and when in consequence many motor owners and others are considering the purchase of a new car, it is perhaps convenient to refer to that corner-stone of English commercial law, the Sale of Goods Act, 1893

IN buying forward, say, three months ahead, disputes over delivery dates, warranties as to material, questions of carriage, and the right to cancel the order are matters which are bound to arise and exercise the minds of buyers and sellers. The Sale of Goods Act provides the legal solution to all these difficulties.

First as to the form of a contract to buy and sell, the Act says that every contract for the sale of goods over £10 must be either in writing and signed or there must be some part payment or delivery of the goods. Otherwise, the sale cannot be enforced. The signed contract need not be a formal document. Any note or letter indicating that a contract has been made is enough. So if there are letters passing to and fro between the parties in which it is acknowledged that a promise to buy and sell has been made, that will do. Both parties need not sign, but of course it is only the party who has signed that can be sued.

The Act expressly states that there is nothing to prevent a contract being arranged for the sale of "future goods," that is, goods to be manufactured or to come into existence some time after the bargain has been made, but it is distinctly provided that stipulations as to time of payment are not to be deemed to be of the essence of a contract, unless a contrary intention is expressed in the agreement.

Stipulations as to time of delivery of the car would generally be deemed essential, and if delivery was long overdue the buyer could cancel the contract, reclaim his deposit and even demand damages.

But all this is subject to any express terms agreed on in the contract. If no stipulation were made otherwise, the buyer could claim delivery before the seller could demand payment, but there is nothing to prevent the parties making any agreement they like.

If a stipulation (such as delivery date, make, colour, or model) is expressed as essential, or is imposed in such a way as to show that it was of the essence of the contract, the non-fulfilment of such a stipulation by one party gives the other the right to cancel

the whole contract. But if the stipulation is not made an essential condition then its non-fulfilment will not give a right to cancel, but will only be a ground for claiming damages.

It is difficult, in the case of a sale of a car, to decide what is an essential stipulation. Remarks made in a manufacturer's catalogue that the car will do so many miles to the gallon, or

effect of the Act is that the vehicle must be "reasonably fit," but articles sold under a patent or trade name are not sold subject to any warranty as to fitness. The article must, however, always be of saleable quality.

Damage occasioned to a car in transit through bad packing would be the seller's liability and he must make good the damage. But damage of any other kind would be the seller's or not according to whether he promised to sell the car "delivered" or not. If not sold with delivery included, the legal ownership of the car passes to the buyer as soon as he is notified that the car is ready.

With the legal ownership passes the risk of loss and damage. Accordingly, if the seller's warehouse is burned down and the car destroyed the loss will fall upon the buyer. The question whether the buyer has paid for the goods will not affect his loss, and if he has not paid for them, he will have to pay the seller the full amount just as if the car had been properly delivered to him.

The seller is, however, answerable for any loss due to negligence on his part, and if any delay arises through either buyer or seller, the party who caused the delay will have to bear the loss arising from it.

Whether the seller is to deliver the goods to the buyer's address depends, of course, on the terms expressly or impliedly arranged between them; but if no terms are arranged, the place where the seller's factory is will be the place of delivery, but unless otherwise agreed the expenses of putting the car into a deliverable state must be borne by the seller.

The seller must give the buyer an opportunity of examining the goods. When he has had such opportunity the buyer may reject them if they are not according to contract. But once examined and tested and accepted, the car cannot be returned unless it develops some hidden defect which the buyer could not see on first examination.

In buying a car, therefore, it is well worth while examining the terms of sale and the guarantee of quality. Any modification of the Sale of Goods Act should be jealously watched.

In the case of the sale of a car the

OUR INFORMATION BUREAU.

A WELL-ORGANISED Information Bureau is always available to "Motor Owner" readers. The service it gives is entirely free. It does not matter as to what species of automobile information you seek, your enquiry will always receive prompt and expert attention. This service covers not only the car and its appurtenances, its equipment and possible defect or improvement, but also touring information, routes, hotels, etc., both at home and abroad. In fact, anything and everything directly or indirectly connected with motoring. Enquiries should be addressed to the Information Bureau, "The Motor Owner," 10 Henrietta Street, Covent Garden, London, W.C.2.

will perform certain speed and hill-climbing tests will not be considered as essential, or even a ground for damages, unless the stipulations were expressed as an essential guarantee.

All goods sold must be reasonably fit for the purpose for which they are bought, but even this does not prevent a special bargain to the contrary. But the special bargain must be clearly expressed. In a case where at the end of a maker's catalogue special "terms of sale" were printed which purported to modify the warrants as to fitness which the Sale of Goods Act provides, it was held that no other notification having been given to the buyer other than that contained on the back page of the catalogue, and the buyer not having read or noticed the conditions, the "terms of sale" did not apply and the provisions of the Sale of Goods Act applied instead.



Pointing the Path to Safety

OUT on the wild waste of waters the Lightship with its tolling bell and powerful light points out the path to safety.

The safety of the motorist depends to a great extent upon the absence of worries engendered by the difficult driving conditions of to-day. A mind engaged in speculation concerning the possibility of an accident, with its attendant loss, is not conducive to the skilful driving and quick decisions which the motorist is called upon to display.

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MATTERS OF FEMININE INTEREST

HERE is no time of year when colour makes such an appeal as in the dull days of November, and the beauty of materials in colour and suppleness has been the outstanding note of this season's most successful models. Women's dress evolves very subtly these days; changes are not drastic, nor are they likely to be, for the very nature of modern feminine life ties the hands of the extremest designer, and keeps modes within the practical conveniences of business and social needs.

Everywhere the leading dress shows convinced us that the line of fashion would remain slim, though fullness is introduced by means of pleats, godets and circular cut skirts, that swing or flare. Hats have grown small and very neat, befitting the autumn gales and preserving the poise and well groomed appearance that is essential to the up-to-date toilette for street wear. They are, of course, in particular serviceable to the woman who enjoys the open car, even in the uncertain weather.

Despite the charm of green, from shades of bottle to lime, and absinthe, for evening purposes, warmer colouring is gaining increasing favour as the fogs descend upon us. Copper is rivalling gold in metal tissues, though it is rather more difficult to wear. Rosewood brown and bronze are both becoming for day and even evening gowns, and there are some gorgeous shades of Bordeaux and mulberry, that look even better in dull georgettes than in the brilliant surfaces of velvet. It is almost happier in fact to have the whole wealth of colours to enjoy, than to have to make a serious selection from them for a scheme of dress, since the range is so extraordinarily attrac-

tive. Even blues and purples have not gone out of favour, though the blue is of a kindlier, warmer shade than the ones we enjoyed in the hot weather.

Yet the necessity of thought and decision in colour schemes was never

come, lending an opportunity for greater individuality and exclusiveness in the choice of stockings to match gown or shoes, or for a light stocking in one of the greyer and more neutral shades. Even black silk is returning to favour, and nothing is so becoming to the ankles.

Many materials are still designed with borders, sometimes a material like crepe de chine may have a metal border; shaded patterns or designs of sunset effect are lovely for tea gowns and rest gowns. A lovely little tea frock was of three shades of rose, cut almost like three slim coats, hanging over a straight underslip of the palest pink, and with a long sash collar drawing the coats to meet at a low waistline with a loose bow in a deep shade of rose. Velvet broché on georgette background and velvet are both fabrics that hold first favour for these delightful and intimate garments that we call tea frocks, and which fill in reality many other roles than of the "five o'clock."

Evening gowns are a triumph of the weaver's art. Never have metal tissues or silk or velvet had such mysteriously attractive virtues in their suppleness, uncrushability and lightness, yet their richness of colour is noteworthy too, and to this end artificial silk is often employed in alliance with the other threads, lending them brilliance. Yet not only has

warmth without weight become the slogan of the season, but silks without sound, and the caché of the season's materials is the complete silence of their sway; never a rustle or a swish of passing skirts may be heard.

Of furs one could write endlessly, and these will be dealt with and fully illustrated in next month's notes.



This magnificent squirrel coat is skilfully worked from skins of exceptional quality and even colour. It is lined throughout by squirrel lock, and is a creation by Selfridge's.

more urgent than to-day when coats, frocks, hats, bags, gloves, shoes, stockings, down to the most minute details, have duly to harmonise if we would make any pretensions to good dressing. This gradual digression from the everlasting shades of nude, sunburn, rose, beige, etc., that have grown so commonplace in stockings, is rather wel-

Front Wheel Braking

(Continued from page 26).

experience of racing drivers whose cars have had two entirely independent systems concerned with each pair of wheels—that is to say, in which the foot worked the rear-wheel brakes and the hand lever worked the front brakes. In modern racing cars this arrangement is rarely used, but at one time it was adopted in many successful vehicles, and from the point of view of efficiency has probably no superior.

The second departure from standard four-wheel braking practice occurs in the method of operation. Quite fifteen years ago, when front-wheel braking came first within the scope of practical automobile engineering politics, the method of hydraulic application was not only discussed but was actually materialised and used in several experimental layouts. It is not surprising that it has been revived and, aided by fresh ingenuity, constitutes a highly successful method to-day. Strictly speaking, the word "hydraulic" implies the employment of water as a medium, but it is hardly necessary to say that as oil obeys the same laws as a fluid, and has lubricating and non-evaporative qualities as well, it is invariably preferred. The great advantage of the hydraulic system is that all mechanical compensating gear



An attractive red leather coat of the smart wrap-over style, the belt giving a low waist-line effect. The collar, cuffs and band are of rich fur, treated as imitation tiger. A model by Selfridge's.

is avoided. If one has a brake pedal depressing a piston in a hydraulic cylinder which, in turn, transmits that pressure to four similar pistons, each operating

its own pair of brake shoes, it follows, from physical laws, that the pressure in each will at all times be equal. Any losses entailed in the system may, of course, be easily made good, but with modern design these are reduced to an absolutely negligible quantity. Last, but not least, the connections between the chassis, and the axles and stubs, which move relatively thereto, can easily be established by means of flexible metal or reinforced rubber pipes, thereby doing away with the innumerable small working parts indissolubly associated with the mounting of universal joints.

Fig. 6 diagrammatically illustrates the lay-out of the ordinary form of hydraulic four-wheel brake mechanism, which can be used whether or not the front brakes are self-energising, and has for its principal object the equal distribution of pull with the minimum of working parts.

In the next article I will deal fully with the servo systems of braking, employing mechanical, hydraulic and atmospheric media. They represent the most highly developed of all braking schemes, but, as we shall see, they have their advantages as well as their disadvantages. There cannot, however, be much doubt as to their future potentialities.

(To be continued.)



From left to right—a delightful suit in English velvet with hat to match : a handsome motoring and evening cloak of glamorous gold Denby Dale fabric, lined with leopard skin velvet, and trimmed squirrel. Lastly, a mantle, suitable for motoring, in a new mole grey Denby Dale fabric, handsomely trimmed with specially selected moleskin—three exquisite creations by Reville.

THE 22·4 H.P. VOISIN—INGENUITY AND FINISH

As might reasonably be expected from an up-to-date sleeve valve engine, the running is notably silent and smooth at all speeds

THOSE who followed early developments in the aviation world probably appreciate all that the name Voisin implies in the way of efficiency, ingenuity and care of construction more than motorists who knew not the great box-shaped biplanes of a dozen or so years ago. As things go in what is still a somewhat youthful industry, the Voisin car is comparatively a new comer. It did not appear, in fact, until the name Voisin had become famous in connection with lighter-than-air craft—and when it came, the car created a minor sensation for the modernity of its design and the superb finish of every part, either external or invisible.

Originally the Voisin was essentially a big car, but now two models are made—of 11·1 h.p. (known as the "12·40 h.p.") and the 22·4 h.p. (18·75 h.p., or 18·90 h.p., the latter category designating the sports type). It was the touring model of the larger car which was the subject of our test.

The four-cylinder engine is of the double sleeve valve pattern, and possesses all the liveliness which modern improvements have made possible in the Knight type of engine. So far as mere speed is concerned, the car leaves nothing to be desired, and has



A happy picture of the 22·4 h.p. Voisin at Shenley. The old lock-up in the background is an interesting wayside feature.

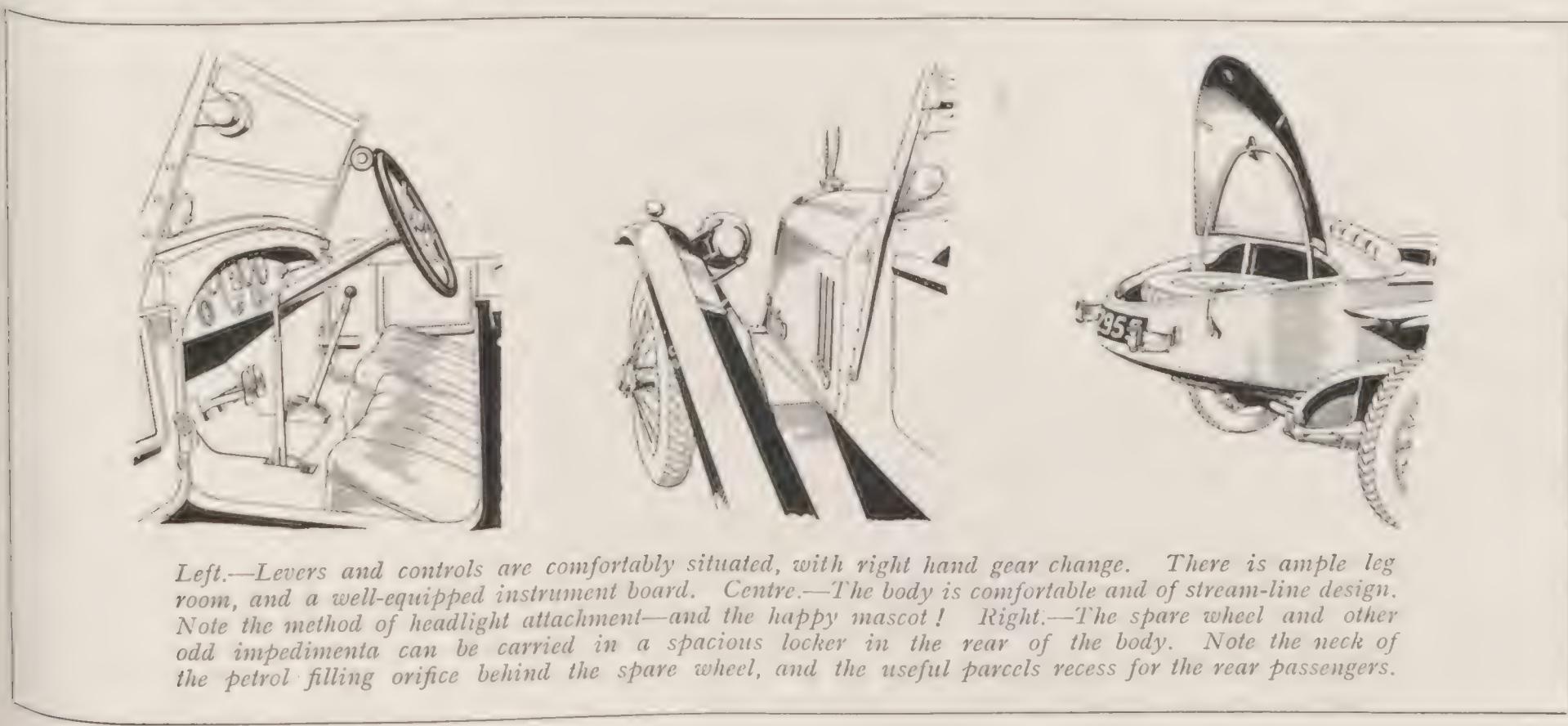
a reassuringly solid "feeling" when travelling at the maximum speed of which it is capable—a sensation of security which is materially assisted by the remarkably sound four-wheel braking system. The flexibility and sheer power of the engine are such that

few main road hills would necessitate a change down from top speed—though, naturally, there will be many occasions when a higher speed would be obtained by a judicious drop to third. This was the case when in the course of our test we took the Voisin up Brockley Hill on top speed at a steady forty miles an hour. This figure would have been considerably exceeded if the gear had been changed.

As might reasonably be expected from an up-to-date sleeve valve engine, the running is notably silent and smooth at all speeds, and although the power is derived from four cylinders only, not many motorists would realise the presence of fewer than six cylinders. The bore and stroke are 95 m.m. and 140 m.m. respectively, giving a Treasury rating of 22·4 h.p. A single plate clutch transmits the engine power to the four-speed gear-box, engine, clutch, and gear-box being assembled as a single unit. The gear change is by a right hand lever.

The four-wheel braking system is operated by the pedal, the side lever applying the rear brakes only.

The agents for this country and sole spare parts "stockists" are Maxwell Monson, Ltd., of 2, Halkin Place, Belgrave Square, S.W.1.



Left.—Levers and controls are comfortably situated, with right hand gear change. There is ample leg room, and a well-equipped instrument board. Centre.—The body is comfortable and of stream-line design. Note the method of headlight attachment—and the happy mascot! Right.—The spare wheel and other odd impedimenta can be carried in a spacious locker in the rear of the body. Note the neck of the petrol filling orifice behind the spare wheel, and the useful parcels recess for the rear passengers.

LE HAVRE TO NANTES IN AUTUMN SUNSHINE

By CLIVE HOLLAND

Few tours at this time of year can better that as outlined below—through the Cathedral towns of Northern France down to that glorious town on the Loire

FEW motor tours are better worth doing in the early autumn—when the French countryside is rich with seasonal tints and more pictorial than it is perhaps at any other time of the year—than a run from Le Havre to Nantes, touching on the way at some historic towns, passing through some of the most beautiful country in central north-western France, and seeing some of the quaint and picturesque villages of the hilly districts round about Le Mans, Argentan and Alençon. A good service of boats from Southampton to Le Havre, with special facilities for the transportation of cars, makes the trip feasible. In these autumn days the Normandy sunshine is very grateful, and adds beauty to the varied landscape and wide open countryside and valleys.

There is nothing in Le Havre to detain one, though as one of the great ports of France it is interesting, and to an extent picturesque. One's route passes out of the great seaport in a north-easterly direction, and an easy run takes one over good roads through Beuzeville to Yvetot, which is situated on the main Havre to Paris line. The town, though picturesque, has nothing except its church to detain one. Béranger wrote a somewhat satirical song about "the Kings of Yvetot," the ancient counts who somewhat grandiloquently sought to assume royal powers. At Allouville, some four miles outside Yvetot, there is a famous oak said to be 1,000 years old, which is some 40 feet in circumference at the base. Crowds of people visit it during the year on account of the two chapels constructed in the hollow trunk, the upper one of which is reached by a spiral staircase, and is known as "The Hermit's Chamber." The lower chapel contains a small altar with a gilded figure of the Virgin.

Southward the road runs pleasantly through the valley to Caudebec-en-Caux, one of the most picturesque and delightful little towns by the Seine, the resort of artists and holiday makers. It was formerly the capital of the Pays de Caux, and has a strong fortress, which was captured by Talbot and Warwick in 1419. The river bank is particularly charming with its avenue of trimmed elms. The church of

Notre Dame (fifteenth to sixteenth centuries) is one of the many fine churches in Normandy, and is a beautiful example of Gothic architecture, deserving the description given it by Henry IV, "the most beautiful chapel in my kingdom." Caudebec is also famous for the "Mascaret" or tidal bore of the Seine, which is a wonderful natural phenomenon occurring several times a month, and well worth seeing. A vast body of water is poured into the narrow reach of the Seine at Quilleboeuf, and rushes up the river in the form of a solid wall some five or six feet in height, stretching from bank to bank and sweeping everything before it, including any luckless barges that may come in its way.

One can either cross the Seine near Caudebec and make for Routot, or proceed to Rouen, that delightful, historical and mediæval town, and make it a stopping place for the night. Everyone has heard of Rouen Cathedral, one of the great churches of France associated so closely with Joan of Arc, and so full of historic and architectural interest. A couple of days are really necessary to see this beautiful and

ancient capital of Normandy, which may be called "The Port of Paris." But in a day one can see the magnificent Gothic Cathedral; the church of St. Maclou, with its lofty spire, beautiful west portal, and exquisitely carved wooden doors ascribed to the famous Jean Goujon, and its fine stained glass; the famous Tour de la Grosse Horloge, with its huge clock-face; the beautiful Palais de Justice, dating from the fifteenth century; the ancient markets, with the Renaissance Chapel of St. Romain (1542); and the Place de la Pucelle, where Joan of Arc was burned as a witch in 1431, in the centre of which stands a fountain surmounted by a fine statue of "the Maid."

From the heights of the town a beautiful view is obtainable of the tortuous windings of the Seine. From Rouen a good and almost straight road runs to Louviers, crossing the Seine several times and affording vistas of the shining river, wide spreading fields, orchards, picturesque farms, and a typically Normandy landscape. The sunsets along this particular part of the route are beautiful in their lighting effects, and especially is this so during the autumn months. Louviers is a bustling, cloth manufacturing town situated on the Eure, with a fine church of Notre Dame possessing a magnificent south portal dating from the fifteenth century.

Our road now lies southward to a point where it branches almost due south-east to Gaillon, a small town where once stood a château of the same name, one of the finest in Normandy, built by Cardinal Georges d'Amboise, and a favourite resort of Francis I. A prison now stands on the spot, and visitors to Paris will find the beautiful façade of the aforetime château now forming the Court of the École des Beaux-Arts. As one approaches Vernon through pretty country one catches sight of the great tower built in 1133 by Henry I of England, when the town was strongly fortified. The church, of the twelfth to fifteenth century, containing several noteworthy pictures, should be visited. The road to Pacy is partly through the beautiful Forest of Visy, and thence one goes southward to Ivry-la-Bataille, with the ruins of its castle and those of the Abbey



The magnificent West Door and Portal of Rouen Cathedral



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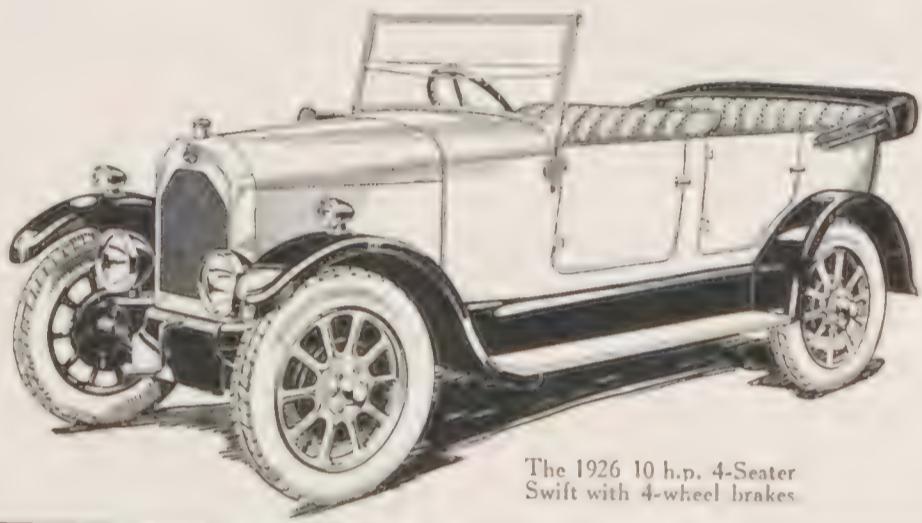
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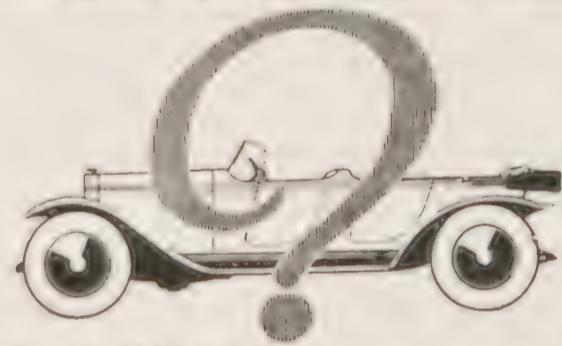
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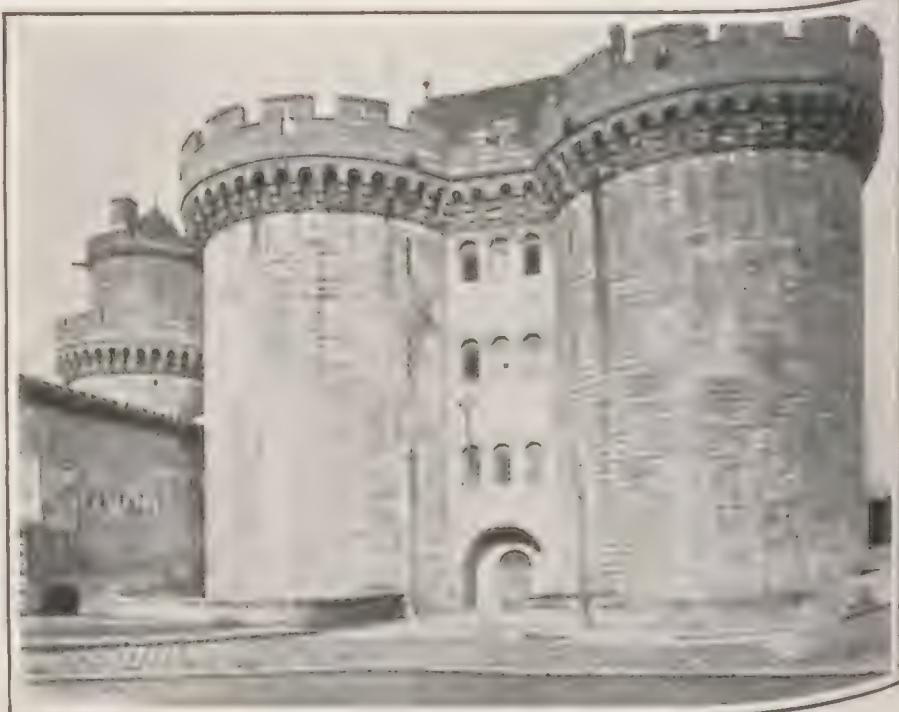
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OUR route takes us through some of the fairest and most interesting portions of France. First comes charming Caudebec, the haunt of artists, and then by the beautiful Seine, silvery and sedately-flowing; Rouen, the city of Joan of Arc. Then south-westward goes the way in succession to Louviers, to Dreux, Maintenon, Chartres



Pigs are not picturesque, but the markets of Provincial France frequently are.

The Chateau of Alençon, attacked in the French Wars by the English, dating from the fourteenth century, and now used as a prison.

with its air of ancient peace, and wonderful Cathedral, Nogent-le-Retrou, Le Mans, the scene of battle, Angers, Ancenis to Nantes on the wide Loire. The pleasant way back across France to Le Havre is by way of Chateaubriant, Laval, Mayenne, Bernay, and Pont Audemer. Truly a delightful itinerary.



Bottom left.—The Church of Notre Dame, Alençon, has a wonderful triple porch, elaborately carved in the Flamboyant style, flanked by graceful turrets.



Bottom right.—Vitré, on the Vilaine, retains some fragments of its former greatness. Many old houses and tortuous streets call for careful driving.



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of the eleventh century, and a pyramid commemorating the famous victory gained by Henry IV over the League in 1590, which forms the stirring incident of a ballad by Macaulay. Ezy-Anet, on the Eure, is our next objective, famous chiefly for the magnificent château, the remains of which lie one mile south east of the little town. The road from Dreux to Chartres is straight but picturesque, and the motorist can go through Maintenon—where there are the ruins of a great aqueduct—with pretty peeps at the river, if he prefers to make somewhat of a detour.

Chartres, of course, is famous for its magnificent cathedral. It is one of the most ancient towns in France, and is said to have been founded by the Carnutes B.C. 600, and anciently was the seat of the College of Druids. Henry IV of Navarre was crowned King of France in the cathedral in 1594. The building is one of the grandest Gothic structures in France, and was dedicated to the Virgin. There is a tradition that it was built above a grotto where anciently the Druids worshipped "a maiden who should bear a child." The present building dates from about the first half of the thirteenth century—two former churches having been destroyed. The interior is majestic and extremely impressive by reason of the harmony of its proportions and the purity of its details. There are many ancient houses scattered about Chartres, which those interested can discover in their perambulations of the town. The Post Office is placed in a fine thirteenth century house, and near by, in the Place de la Poissonnière, is another ancient building.

The road from Chartres through Courville to La Fourché takes us to Nogent-le-Rotrou, with its eleventh-fifteenth century castle once owned (1560-1641) by Sully, Minister of Henry IV. In the Hotel Dieu is the handsome Tomb of the Minister, surmounted by marble statues of himself and wife. At Nogent was born Rémy-Belleau, the poet, whose statue was erected here in 1897. The church of St. Hilaire, tenth, thirteenth and sixteenth centuries is worth seeing.

South westward the road runs to La-Ferte-Bernard, with its Hotel de Ville located in one of the old Town Gates, and a fine church containing curious galleries and elaborate sculptures, linking the Gothic and Renaissance period of architecture. Le Mans, an important town, a big military centre, and the seat of a bishopric, is situated on the Sarthe, chiefly on the slopes of the left bank. It is of very ancient origin, and was the scene in 1871 of one of the great

battles of the Franco-German War. The church of Notre Dame de la Couture has a wonderful portal, with sculptures representing the Last Judgment, etc., and contains a number of interesting architectural features and some noteworthy pictures. The cathedral, dedicated to St. Julian, ranks among the leading churches of France, and although in two distinct parts, differing very widely the one from the other, the general effect of the building is one of impressiveness. In the interior the choir and the fine stained glass windows are of special interest. There is a fine Renaissance building, the Hotel du Grabatoire, opposite the Cathedral.

Through interesting and undulating country our road, keeping in many places close to the river Sarthe, runs via La Fleche, Durtal, and Seiches to Angers, formerly the capital of the historic Duchy of Anjou. The city stands on the river Maine some five miles above where the smaller river joins the Loire, which one has crossed on one's road from Le Mans. The town chiefly lies on the left bank of the river, and the suburb of La Doutre on the right. During the last century Angers was transformed to the rather charming town of to-day from the "Black Town," as it was formerly called by reason of its dull appearance, and the fact that it was so badly built. The old ramparts have been replaced by handsome boulevards, and nowadays the streets are wide, and there are good modern buildings and fine quays and bridges. Among the things to see in this important manufacturing town are the Tour St. Aubin, its square base surmounted by an octagonal storey with four turrets where the spire springs, a Gothic structure of quaint design; the Prefecture, containing in the courtyard a screen of fine arches dating from the 11th century decorated with sculpture and paintings; and the church of St. Martin possessing antiquarian interest. The Cathedral of St. Maurice is a Romanesque-Gothic building mainly dating from the twelfth-thirteenth centuries, with two flanking towers and spires on the west front, and a third tower between them. The magnificent stained glass windows are works of the twelfth, fifteenth and sixteenth centuries, and the tapestries of the fourteenth-eighteenth centuries; a calvary by David d'Angers, in a chapel; and the pulpit should be noted. The Bishop's Palace, to the north of the Cathedral, dating from the twelfth century, but thoroughly restored in modern times, is a fine example of a mediæval mansion. Close by are two fine old timber houses with elaborate carving. The museum is also worth seeing, as it contains some

interesting and valuable works of art. The castle, which formerly had seventeen towers and stands on a rock dominating the course of the Maine to the west, dates from the thirteenth century. The road to Nantes lies close by the banks of the Loire through St. Georges, Ingrannes, Varades, Ancenis, and Oudon.

The city of Nantes is one of the largest in France, and is placed mainly on the left bank of the Loire, which here breaks into six arms, and receives the waters of the Erdre and the Sévre-Nantaise, which form many islands. Its harbour has of late years been considerably improved, resulting in an increase of trade and prosperity. Nantes to-day is a fine modern town with its most characteristic feature the numerous bridges over the various rivers, and the fine eighteenth century houses which line the quays and streets. The latter, however, as a general rule are narrow and rather tortuous, and the absence of main thoroughfares is noticeable. The Edict of Nantes, issued in 1598, granting Protestants liberty of worship and equal political rights with the Roman Catholics, is one of the chief historical events connected with the history of the city. During the French Revolution Nantes was favourable to it, and resisted the Vendean in 1793. The monster Carlier was, however, sent to Nantes, and he ordered the execution, without trial, of all loyalists who had been imprisoned, and finding the guillotine too slow a method sent hundreds of them at a time into barges, which were scuttled and the prisoners drowned. Among the chief things to see in Nantes are the castle; the important Museum of Natural History; and the Cathedral of St. Pierre, with richly adorned portals, and a very lofty and imposing nave. In it are some interesting tombs, including that of Francis II, last Duke of Brittany, and his wife, Margaret de Foix.

The return to Le Havre, across country, provides a variety of scenery. An interesting and satisfactory route is by way of Châteaubriant, and its sixteenth century château; Vitre, with its ancient houses and narrow streets; Laval, a quaint town rising in tiers, dominated by the Cathedral, above the right bank of the Maine; Mayenne, picturesquely placed on both banks of its river, with Notre Dame and the castle in the foreground; Alençon, far-famed for its lace, also with a church of Notre Dame, with a fine triple porch; Bernay, ancient and interesting; Pont Aude men, picturesquely situated with a fine church containing good stained glass, and curious carvings; to Caenbec, and thence Le Havre itself.



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*If you wish in this world to advance,
Your merits you're bound to enhance;
You must stir it and stomp it,
And blow your own trumpet,
Or, trust me, you haven't a chance.*
—W. S. Gilbert.

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Gt. Britain and Canada, 15/- per annum, post free.
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THERE IS NO TIME LIKE THE PRESENT

MOTORING

NEWS OF THE MONTH

Winter Driving.

The number of drivers who use their cars and motor-cycles during the winter is growing greater every year. The R.A.C. is meeting this by maintaining a bigger winter service of Guides on the road than ever before.

Water Charges at Cardiff.

Representations made by the Automobile Association to the Cardiff Corporation have resulted in the City Council substantially reducing the charges to motorists, resident in Cardiff City, for water used in washing cars. The old charges of 15s. per annum for each car, with an additional £1 10s. where a hose is used, have been reduced to 10s. and 15s. respectively.

Widespread Popularity.

Of the 53 British motor manufacturers who exhibited at the Olympia Motor Show, no less than 31 use themselves, and recommend for use on their cars, Wakefield "Castrol" motor oil, irrefutable proof of the widespread popularity of this lubricant, the product of an all-British firm.

Royal Cars and Anti-Dazzle.

Following upon the widespread interest in the "Anti-Dazzle" tests conducted by the R.A.C. recently, it is significant to note that Messrs. C. A. Vandervell and Co., Ltd., have had the honour to instal their device to the lamps of three of the new 57 h.p. Daimler cars recently added to His Majesty's fleet.

A Useful Safety Lamp.

Quite a useful and efficient accessory, the F.W.B. Safety Lamp, should receive the considerable patronage, which it truly merits. The advantage of this new safety lamp is that it is easily fitted, and requires no additional wiring. During the day a red triangle with a white centre is clearly visible, but at night the outline only of the triangle is brilliantly illuminated. This also acts as a powerful rear light, so that the necessary warning to following vehicles is discernible on all occasions for a distance of over 200 yards. Moreover, it eliminates the necessity of painting or fitting ugly red triangles on to the body or wings of one's car. Made in two sizes, painted black at 17s. 6d., and in polished aluminium at 21s., it is sold by the F.W.B. Safety Lamp Co., of 18, Victoria Street, London, S.W.1.

The Spirit That Wins.

Both motorists and motor-cyclists will be interested in the wonderful achievements of British racing men on the track and in road tests both at home and abroad.

The outstanding success is perhaps that of Capt. J. R. Duff and Mr. Woolf Barnato, who broke the coveted 24-hours world's record on Capt. Duff's

standard Bentley, a British made car, carrying a tax of only £16. Two other World's Records and 16 International Records were also broken by Capt. Duff on the same car. Mr. B. S. Marshall won the Boulogne Grand Prix for the second year in succession. Lieut.-Col. and Mrs. Stewart on September 14th broke the world's 11 and 12-hours and 700 miles records, and Mr. Porter won the French Grand Prix on October 4th.

It is also of interest to note that these and many other records were broken on that ever-popular spirit—Pratts Perfection.

British Successes.

On August 27th, at the Boulogne Speed Trials, Mr. J. A. Joyce, driving the four-cylinder A.C. racer, achieved the following results:—4 kilometre flat, second in class; 1 mile hill climb, first in class; 500 metre hill climb, first in class; and fastest time of the day.

In this last event, the little A.C. beat all the competitors without exception, including cars of many times the cylinder capacity and one or two special models against which the A.C. was supposed to have no chance.

The A.C. car also beat the special racing motor cycles which for the distance were supposed to be capable of putting up easily the fastest time.

It is good for all British manufacturers when a British car wins international events.

A Sign in a Night.

Londoners and visitors from the provinces have been struck by the effectiveness of the huge sign erected on the Devonshire House site, Piccadilly, announcing that the Citroen Co. have taken the whole of the centre part of London's newest building as an enormous showroom for their cars.

The history of this sign is interesting.

The lease for the premises was signed on the morning of Wednesday, 7th inst., and at 11 a.m. of that day the P.D.R. Sign Co. of Hammersmith was given instructions to proceed with the erection of a sign.

Despite structural difficulties and the fact that the P.D.R. Sign Co. were fully engaged with other urgent work for the Motor Show, the sign was completed and in position by 3 p.m. of the following day, Thursday.

It is 105 ft. long by 8 ft. deep and the name Citroen is in blue, while yellow occupies the centre of the sign, which stands out boldly from a white background.

Blue and yellow crests—the famous chevron trade mark of the Citroen Co.—occupy the extreme ends of the sign and in between them and the name Citroen appear the words "new showrooms," carried out in bright red.

British Co-operation.

An article in a recent issue of the Oil News describes the successful production of a British light lorry with caterpillar tread for use in marshy and sandy districts of tropical countries. These lorries were built at the instance of the Anglo-Persian Oil Co., which brought together two British companies to co-operate in their construction.

In a very special degree, the Anglo-Persian Oil Co. is a British national possession, as the majority of its stock is held by the nation. In addition to this, the Anglo-Persian Oil Co. is alone in that the whole of its great fleet of tanker-ships are British and were built in Britain, and that "B.P." spirit is British and refined in Great Britain. Every drop of "B.P." motor spirit sold in this country is refined at Llandarcy, South Wales, or at one or other of the company's Scottish refineries, of which the newest is at Grangemouth. Through these various activities of production and distribution the company employs, not indirectly but directly and constantly, over 20,000 people in this country.

As the production of petroleum in the British Empire is, unfortunately, very low, and not enough to meet more than a small fraction of this country's requirements, it is vitally important to build up a home oil industry.

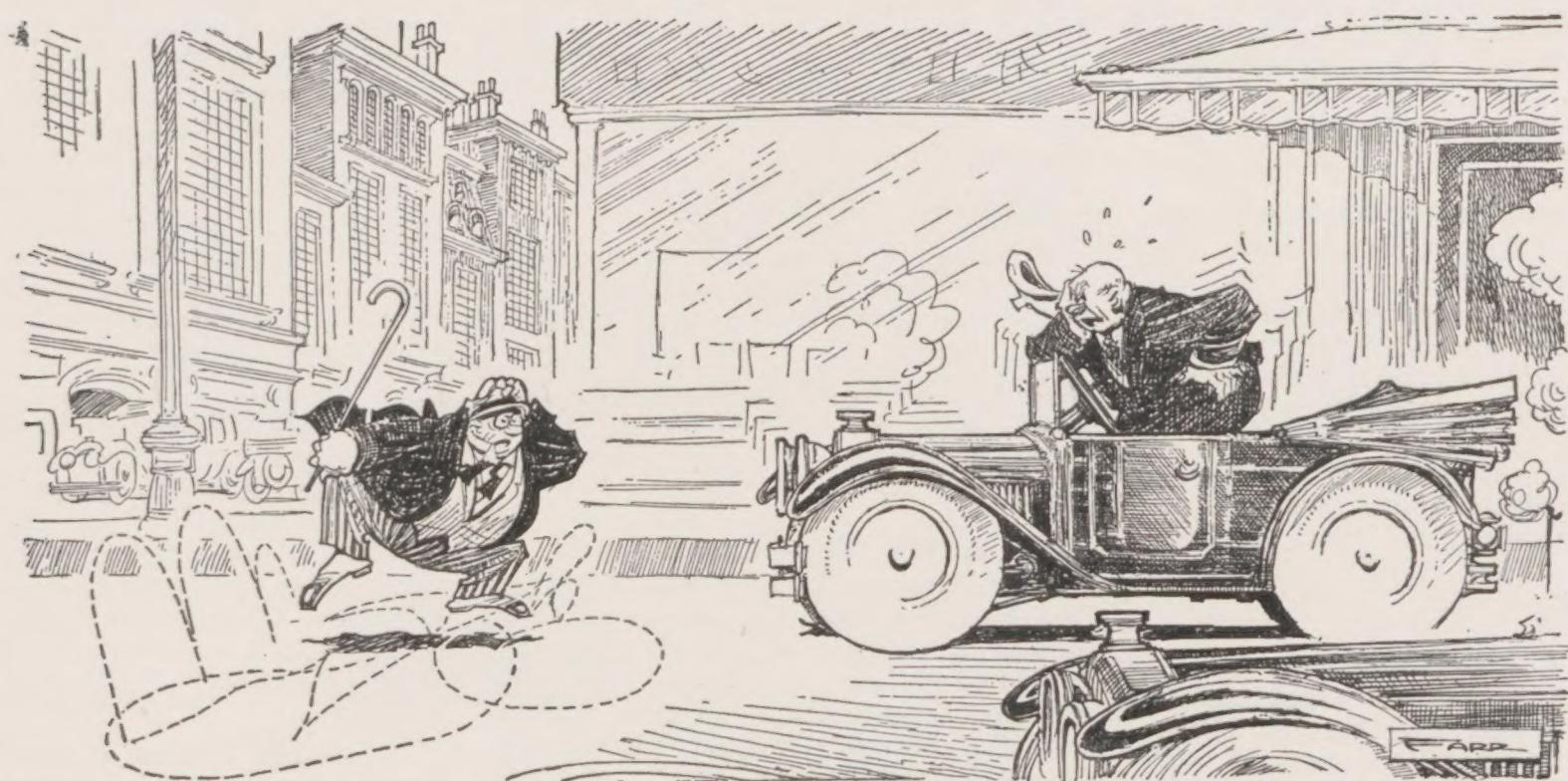
**A GROANING SIDEBOARD.**

A few of this season's trophies won by the A.C. car.

The huge cup in the foreground represents the one hour record in the 1,500 C.C. class, just about the most coveted event in the season's programme. The cup is presented by the "Light Car and Cyclecar."

In addition, A.C. Trophies include a large number of teaspoons, medals, etc., which are not in the photograph.

"WITHIN THE LIMIT OF BECOMING MIRTH"



Motorist to excited "Jay Walker": "Well, have you decided upon anything yet?"



*"A landslide! Then what am I going to do? I can't turn here."
"I reckon you'll have to reverse, Mister. It's only eight miles."*

BROADCASTING BUSINESS BREVITIES

Sold Out.

It is a striking tribute to the confidence which Chrysler cars have created during their meteoric career in this country, that the entire output for Great Britain during the coming year was bought up by the dealers and distributors on the first day of the Motor Show. It is understood that Messrs. Grimshaw's, of Manchester, alone placed an order for six hundred of these cars.

An Excellent Performance.

The Willys Knight Six-cylinder car recently travelled from Land's End to John o' Groats on top gear, without a single change in traffic.

The route included the famous Berriedale Hill, about 40 miles from John o' Groats.

The car was entered under the R.A.C. rules and regulations, and was officially observed throughout the trial. The car used is guaranteed to be a standard model in every respect.

A Presentation.

An incident of more than usual interest marked the proceedings at the dinner given by the manufacturers of the "Amazing A.C." to their agents and a few members of the Press at Frascati's on the evening of Monday, October 12th, under the chairmanship of Mr. S. F. Edge. This exceptionally happy interlude in an evening of pleasant proceedings was the presentation—or, rather, series of presentations—to Mr. T. Gillett to mark the appreciation of the various donors of Mr. Gillett's wonderful world's record when for 24 hours on end he drove single-handed, and without relief, a 6-cylinder A.C. at an average speed closely approximating 90 m.p.h.

Mr. S. F. Edge paid high tribute to Mr. Gillett's ability and determination no less than to the efficiency of the car, and on behalf of A.C. Cars, Ltd., presented a case of two very fine guns, a pair of binoculars subscribed for by the staff, and a case of cutlery from Thos. Smith Stamping Works, Ltd., whose stampings are universally used throughout A.C. productions.

Interesting Comparisons.

An exceedingly instructive and humorous booklet, which draws comparisons between the engine of humanity and the petrol engine, and in the course of which the working principles of practically every component of the car is happily explained, has been issued by Messrs. Cox Carburetters, Ltd., Lower Essex Street, Birmingham. On receipt of a postcard, mentioning THE MOTOR OWNER, a copy of the booklet will be forwarded by the above company.

A Change of Address.

As from September 25th, 1925, the London wholesale showrooms of the Daimler Company will be transferred from Chapter Street House, Vauxhall Bridge Road, to Store Street, Tottenham Court Road, W.C.1. The new showrooms will carry, as at Chapter Street, a large and representative stock of new cars. The new telephone numbers are:—Museum 9673 and 9674. The telegraphic address is:—"Daimler, London," as hitherto.

The nearest Tube Station to Store Street is Goodge Street, and the showrooms are within five minutes' walk of Oxford Street.

B.S.A. Cycles, B.S.A. Guns and B.S.A. Tools, Ltd., will also be housed in the same buildings, and carry stocks as hitherto.

A New Distributing Depot.

From September 29th, Bean agents, owners, and prospective owners of Bean cars in Lancashire, will have an opportunity of getting closer into touch with the Bean organisation, as there is now opened in Manchester a new Distributing Depot. The building is situated at Wood Street, off Deansgate—quite in the centre of Manchester's car area. The advantages of this Northern depot are obvious. The Bean agent has a near-at-hand centre from which he can obtain delivery of cars and spare parts in the shortest possible time, while the Bean owner is offered a complete service of exactly the same kind as is available at the Bean works at Dudley, or at the Service Depot in London.

Proof of the Puncture-proof.

In view of the interest which is now being taken in the expansion of British

trade in foreign markets, it may interest readers to know that, although Messrs. Bramco Tube Co. were not exhibiting at the Motor Show last month, they were fortunate in securing from an Overseas visitor a contract for Compression Puncture-proof Tyre-saving Tubes, for the supply of the South American markets, covering over 20,000 tubes, ranging in sizes from 30 in. \times 3½ in. up to 40 in. \times 8 in. We may further add that this contract was placed after some experience when the tubes had shown their value in defying punctures by the huge thorns and other puncturing material so frequently met with on the campos in South American countries.

The Book for the Car.

A very beautiful book has been issued by Messrs. Rolls-Royce, Ltd., illustrating and describing the various models of their new six-cylinder 20 h.p. car. The artistic pictures, which are detachable, show the Open Touring Car, the Coupe, Landaulet, Limousine, and the Enclosed Drive Cabriolet.

The Goddess in the Car.

Every fair reader of this journal can obtain on application to Messrs. Ferodo, Ltd., Sovereign Mills, Chapel-en-le-Frith, an interesting booklet entitled "Should a Woman Drive a Car?" Whether she should, or should not, is answered in a very clever manner by words and pictures. Lady readers should write for the answer.

Front-wheel Brakes.

In addition to the famous Bean cars, Messrs. A. Harper, Sons and Bean, Ltd., are also the sole manufacturers in Great Britain of Perrot-Bendix front-wheel brakes.

In Great Britain during twelve months over 100,000 people have been injured—nearly 4,000 fatally—in road accidents. These figures are sufficient to emphasise the necessity for an efficient and positive means of stopping in the shortest possible distance without skid or slip. The Perrot-Bendix front-wheel braking system provides that means. But while the capacity to stop is a vital qualification in a brake, mechanical simplicity is essential also. The action of the Perrot-Bendix brake is mechanical; the energy is developed within the brake, and the process is simple and foolproof. There is nothing to get out of order; they are fully enclosed, protected from dust and mud; nothing can impair their efficiency. For these reasons Perrot-Bendix front-wheel brakes merit the attention of all car-owners.



THE PRESIDENT GREETS THE SECRETARY.

During his recent visit to America Colonel Hacking, D.S.O., the popular Secretary of the Society of Motor Manufacturers and Traders, Ltd., met Sir William M. Letts, President of the Society, at the Willys Overland Works, Toledo, the English Company of which Sir William is the Managing Director. The car is the latest Willys Knight 6-cylinder Saloon, which, with the new Overland "Six," is exciting considerable interest.



Regular Running and no Dirty Plugs on **PRATTS**

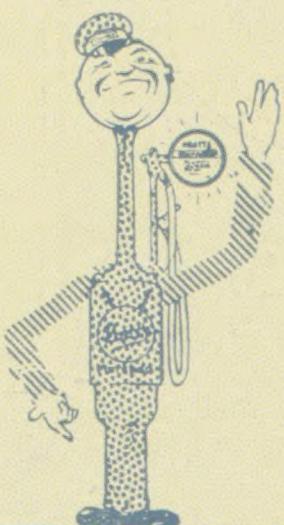
Capt. J. R. Duff, writing with reference to his recent epoch-making achievements when he established

THREE WORLD'S RECORDS
on his standard Bentley Car,

says :—

"The UNIFORMITY of the spirit you supplied was evident in the REGULAR RUNNING we obtained. The laps speeds for many hours on end did not vary more than one-fifth of a second. It is also worthy of note that we DID NOT HAVE TO CHANGE A SPARKING PLUG nor did the valves suffer in any way, though we averaged 97 miles per hour for 18 hours, WHICH SPEAKS WELL FOR THE QUALITY of the PETROL."

What Pratts
does in
Records—



—Pratts
will do
on the Road

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